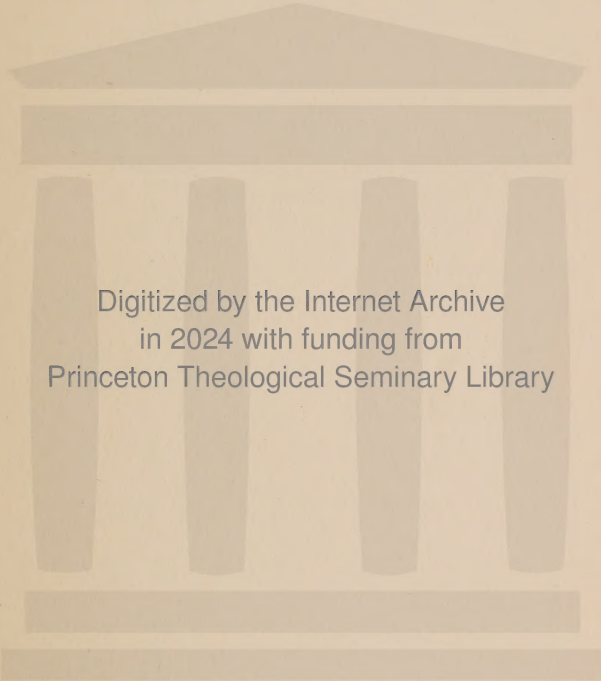
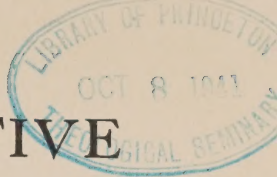


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AN INTERPRETATIVE HISTORY OF EDUCATION



✓ BY
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To
MY WIFE,
SON, AND DAUGHTER,
who have given constant encouragement
and much valuable assistance

PREFACE

It has been the lessons of the past rather than the mere facts of the past which have determined the selection of material for this book. What Aristotle thought is of less importance than what he makes us think. In presenting the views and practices of ancient people the aim has been to present them with reference to their bearing upon modern education.

The best of a book is not the thought it contains but the thought it suggests. It is hoped that the material presented in the following pages will stimulate the reader to think of some of his own problems in a new light, and to think of American education in relation to that intellectual development of which it is a part. The author has intended every chapter, regardless of its title, to be a chapter dealing with some phase of American education. The date of a writer is no indication of his modernity. In many respects Plato is one of our most modern writers. It matters little what he said to the Greeks. Our interest is in what he says to us.

My indebtedness to Dr. Paul Monroe for his textbook and other writings is greater than I can express. I wish also to acknowledge with gratitude the assistance of Dr. R. D. Russell, Professor W. Wayne Smith, Professor Bernice McCoy, and Miss Georgie

Little, members of my department, who have been most generous with their time and thought in reading the manuscript and in giving valuable suggestions. I wish also to give a late, though none the less hearty, expression of appreciation of the help I have received from Professor E. M. Hopkins of the University of Kansas. He does not know that this book is being written, but I wish to thank him as well as I can for the encouragement he gave me as an undergraduate student, and for the red ink he distributed over my themes.

J. F. MESSENGER

University of Idaho
February 1931

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SUGGESTED READINGS

The writer has tried to present the material of this book in a way to be clear to the student who has neither time nor opportunity to do more extensive reading. When used as a textbook it is desirable to have a few well selected books for reference. The following will be found useful. See also Bibliography on pages 371-373.

1. A Cyclopedia of Education—Edited by Monroe.
This work consists of five volumes of reliable and condensed information about almost every topic needed in a general study of education. As a reference book it is very valuable.
2. Source Book in the History of Education, Greek and Roman Period—Prepared by Monroe.
For the average student this will give all of the reference material needed for the period covered. It contains quotations from the best Greek and Roman writers.
3. Readings in the History of Education—Prepared by Cubberley.
This contains many quotations and copies of documents dealing with education, chiefly during the middle ages and modern times. For the most part it gives material not included in Monroe's Source Book.
4. The following are among the most stimulating and interesting books on education which have ever been written. They have inspired many writers, and have had a great influence upon modern education. If possible students should read some in each book. Rous-

- seau's Emile ; Pestalozzi's Leonard and Gertrude ; and Spencer's Education.
5. Text-Book in the History of Education—Monroe.
This is philosophical in its treatment, and gives a profound account of the intellectual development of the race from primitive times to the end of the nineteenth century, but gives very little attention to education in the United States.
 6. Education in the United States—Knight.
Gives a good account of education in the southern states. Much of this material is not easily found elsewhere.
 7. Public Education in the United States—Cubberley.
 8. History of Education—Cubberley.
Both of these books by Cubberley are well filled with facts, and are more useful for reference than for continuous reading.
 9. History of Education, During the Middle Ages—Graves.
 10. History of Education, in Modern Times—Graves.
These two books treat of many topics rather briefly, and they are very useful as reference books, but the continuity of educational development is not made obvious.
 11. Historical Survey of Pre-Christian Education—Laurie.
This book is mentioned last because not every one will be interested in it on account of the field it covers. It gives a very interesting account of education among the Egyptians, Arabs, Chinese, Hindus, Medo-Persians, Greeks, and Romans.

If the writer were asked which of these books to buy in case a school or the individual reader could not own all of them he would be obliged to say that personal interests would

largely influence the choice, but without knowing the personal interests, or the special lines of thought which the teacher wishes to stress he would say that the order in which they are given above would be the order of preference.

PART I

FROM PRIMITIVE TIMES TO THE
RENAISSANCE

CHAPTER I

INTRODUCTION

IT is not the plan of the writer to make an exhaustive study of original sources, nor to attempt to evaluate disputed points of fact. With reference to many "historical" events it makes little difference whether they ever happened or not. Plymouth Rock represents to us the landing of the pilgrims. It makes little difference whether they landed there or not. The matter of significance is that they landed, and still more significant is the attitude we take toward the landing. Paul Revere's ride has meant much to the American people and will continue to mean much even though historians do prove that Paul never took the ride, and even though we know that the ride was neither difficult nor heroic. The list of significant historical events which never happened would be a very long one. In dealing with human affairs significance is far more important than facts.

In the chapters which follow we shall deal somewhat with events, real or supposed, but much more with ideas. The progress of civilization has been determined by ideas. An entirely wrong idea may have

a powerful influence on the world. Our problem will be the natural and logical growth of civilization through changing ideas and ideals. The dominant ideas of any period are those which got into the educational systems either in practice or in literature. Ideas frequently appear in literature many centuries before they appear in practice. For example, some of the ideas advanced by Plato more than two thousand years ago are just coming into practice today.

In thinking through the educational development one point must always be kept in mind: Every one is always perfectly logical. He thinks what is perfectly reasonable to him. If two persons come to different conclusions about the same matter it is because they do not think of the same phases of the subject. Young people who want to go to a picnic will see a little blue sky and conclude it is going to be fair, while a farmer who has been praying for rain will see a little cloud and conclude it is going to rain. Each reasons well on the basis of what he looks at. A perfect reasoner would, of course, take into account all of the data. But the makers of history have not been men who have taken into account all of the data with reference to the situations in which they have acted. Part of our job will be to put ourselves in the place of other people and see why they did what they did, or better yet think out what we should have done in their places if we had had their point of view. After thinking the matter through in that way we may look at the record and see if that

is what they did. Usually we shall find that they have done the reasonable thing.

Probably very little of civilization has been lost. If it has been lost we do not know it, and therefore we are not greatly influenced by it today. It is safe to assume that the strong influences of the past were preserved. At least this is a serviceable assumption. If the opposite were true it would give us no basis for our thinking. What do we think, how did we come to think it, and what have people thought that is valuable? These are the things that concern us.

If we were anxious to start with the very beginning of the evolution of education we should need to begin with education among the lower animals. There is something for us to learn from them. For present purposes we need not attempt to study animal psychology. A few characteristic features of the method of learning will be sufficient. The most important thing to notice is that an animal learns everything directly by his own experience repeated. He learns almost nothing by imitation, and nothing by being told of the experiences of others. Some one may object, and say that human beings also learn only by their own experience. In one sense this is true, but a human being can learn by having the experience of seeing some one else do something. This is profiting by the activity of another, and therefore we may call it learning by another's experience. Human beings can learn also by being told what some one else has learned by direct experience. If we agree that we

shall not quarrel over terms when the meaning is clear we may say that the stages of learning are as follows:

First, we may learn by our own experience. Animals learn this way only. Humans must learn much that way, even though it is the lowest form of the learning process.

Second, we may learn by observing the activity of others, inferring their experience, and imitating them. In this way we benefit by their experience, and hence we may call it learning by the experience of others. Many things can be learned best in this way.

Third, we may learn by being told of the activities and experiences of others and thus profiting by their experience. A very large part of our schooling consists of experience gained in this way. This is what nearly every one thinks of when we speak of instruction, but instruction really includes more than this.

Fourth, we may learn by thinking out relations and drawing conclusions about things that have never been tried. Inventing machines or constructing thoughts come under this class. It is often said that there is nothing new in the world, but that is just an extravagant way of saying that we are continually using the old in making new things. George Washington never rode in an automobile, used a telephone, nor turned on the electric light. *Paradise Lost* did not exist before Milton wrote it. Of course new things are not made out of nothing, but that does not

prevent them from being new. Again let us not quibble over words so long as there is no doubt about the meaning. This form of learning is the most difficult and it is found only in the advanced stages of development.

While these four stages of intellectual development represent the stages of the learning process, we must recognize that the race had attained sufficient development to make some use of all four before the period of recorded history began.

In passing over the various periods of civilization it is desirable to fit ourselves into the period and continually ask ourselves what we should have done with the same background and the same point of view. Scholarship is largely a matter of method of thinking. A very scholarly piece of thinking was done once by a half-witted boy. A resident of the small town in which this boy lived owned a cow. One day she strayed from home, and the owner offered a reward of five dollars to any one who would find the cow. Many of the town boys started out to look for her. It was not very long until the half-witted boy returned leading the lost animal. He received the reward, much to the surprise of the other, presumably more intelligent, boys. Some one asked, "How did you find her?" His answer indicated a very high degree of intelligence so far as that particular activity was concerned. He said, "Well, I just went over to the pen where she had been and said to myself, 'now where would I go if I were a cow,' and

I did and she had." We need that same method of thinking in studying the development of civilization. If we put ourselves in the place of a group of people and ask ourselves what we should think and what we should do if we had their basis for thinking, the chances are that we shall conclude that we should think about as they did. If one had a perfect understanding of any period he could almost think out what the next period would offer before he had read it. At any rate it is very desirable to think ahead of our reading. The student who applies the half-witted boy's method will find the work more interesting and very much easier.

CHAPTER II

PRIMITIVE EDUCATION

THE ideas and customs of primitive people seem at first thought to be far removed and very different from our own. However, if we should ask ourselves what we should have thought and done if we had had their experiences, their surroundings, their data and their equipment it is probable that we should conclude that we should not have done very much better than they.

The basic problem of primitive people was how to get a living and protect themselves and their families from the destructive forces of nature and from enemies, both human and animal. We are less interested in these phases of their life than we are in the intellectual development. Their intellectual development was stimulated somewhat by their physical needs, but more by their social and spiritual interests. Physical needs and intellectual interests were closely related then, as they are now. Just how tribal consciousness originated is not known, but it is sufficient for our purposes to recognize that they had it. Each individual must be fitted to the tribe. This fitting process constituted the major part of his formal education. He learned how to get a liv-

ing and how to protect himself without knowing he was being educated and without his teachers knowing they were teaching him. He learned partly by imitation and partly by being told what to do. There was little explanation, and not much understanding of the skills he acquired. He learned by participation in the actions of his elders. This is a good way to learn but it does not result in rapid progress of the group. In fact it scarcely admits of progress sufficient to recognize. In a study of ethnology many things would be interesting and significant which we shall pass by.

The intellectual development of primitive people is very interesting and suggestive. Let us assume that we have a group of people with no accumulated knowledge whatever. They must be interested in people and in things, and they must have some curiosity. This we assume as a starting point. The activities of the day are over and they are sitting around talking. What will they talk about? People and things. The most natural thing is for some one to tell what he did during the day—especially if he did something unusual. The one who has had no exciting experience today may tell of one he had some other day. If he never did anything great perhaps his father did. Or, if his grandfather or some other ancestor, or even some other man had done something very remarkable that will do to tell. A good story will bear repeating many times. Thus, his story and his story and his story become history. History

in the beginning was not very reliable, and it is still tainted with its inherited tendencies.

After some practice a few were able to decorate their stories and improve the form of telling. Especially attractive forms were often repeated. Thus literature arose. Literature, history and tradition were of course so mixed that it is not easy to separate them. It is not necessary to separate them, but it is desirable to recognize the nature of their beginnings. Æsthetic, emotional and dramatic features made strong appeals. The unusual and the spectacular made more impression than the usual.

Curiosity manifested itself also concerning the material world about them. Sun, moon, storms, seasons, and all things which change attract attention. Curiosity prompts the questions: what? and why? Answers must be given. They were given, and here is the beginning of the natural sciences. And they were more scientific than we usually think. They lacked data, but with what they had they did very well. They noticed a great many things and offered explanations of them. Wherever they could see causes or think of natural probable causes they accepted them. If they could see no natural cause for an observed phenomenon they assigned a spiritual cause. We call this system of thought animism, and we class it as belonging to the primitive period. However, if we stop to think we shall notice that we use the same system. If we travel through the woods and see the trees growing in no particular arrange-

ment we think nature alone is responsible for the grove. But, if we see the trees arranged in straight rows we conclude that some one planted them. The reason we give an animistic explanation to the grove with trees in rows is that we cannot see how nature could have scattered the seeds in straight rows. Our animism is just like that of primitive man except that we have been able to find natural causes for more things than he could. Our method of thinking is very much the same.

Primitive man believed very firmly in the inheritance of acquired characteristics. He had no formal name for the conception, as we have, but he had the idea. The story of the robin-red-breast will illustrate. The robin has a brown—or as we usually say a red—breast. How did this happen? In the early ages of the world when there was no fire on earth and all of the fire in existence was in the home of the god of fire the robin tried to serve his fellow creatures by going to this god to beg fire for the earth. While there he got too close to the fire and scorched his breast. Since then all robins have had scorched breasts. Is not that the theory of the inheritance of acquired characteristics applied more rigorously than Lamarck ever applied it? The mole is blind, the snail is slow. How did these things happen? Once upon a time a great enterprise was to be undertaken in the interests of the group. Each individual contributed the best that he had. The snail was the swiftest of creatures and he contributed his speed,

the mole had the keenest sight and he contributed this. Since then snails have had no speed and moles have had no sight. Again the inheritance of acquired characteristics. These few illustrations may serve to show their efforts to explain the things they observed. They used natural explanations where they could and where they could not think of any natural cause they assigned a spiritual one, just as we do. Not only their science but their cosmology, their theology and their ethics formed the beginnings of ours, and there is not so much difference as we sometimes think.

The primitive conception of justice—often expressed by the phrase “an eye for an eye and a tooth for a tooth” had really two phases—pass it back or pass it on. If one receives an injury justice is done when he passes it back. That evens things up. If he cannot pass it back it is felt to be somehow “on him” until he can pass it on. This is the same system that college students use today. If a student from X college does something to a student from Y college then all is not well until a student from Y college can pay it back by doing that same sort of a thing to some student in X college. If the sophomore class is particularly hard on the freshman class one year then that freshman class seems to feel that the humiliation is “on them” until they can “pass it on” to the next freshman class.

The various initiation exercises used by secret societies today are based upon the same fundamental

conceptions as those held by primitive people. The main point is that the new initiate should feel that he belongs to the group. Members of the group must have something in common which is not shared by others.

The first monopoly the world had was a monopoly of learning. The learned men of the tribe—sometimes called medicine men—kept their knowledge secret. They looked after the spiritual interests of the tribe. Since diseases were thought to be caused by spirits the important thing for the medicine man to know was how to deal with the spirits. When evil spirits were in a person it was necessary to drive them out. Twisting the arms and legs of the patient or otherwise causing him pain was not to punish him, but to make his body such an uncomfortable place for the spirits to stay that they would go out. The theory of medicine on which they acted was that the patient could stand more than the evil spirits in him and therefore they could drive the spirits out without killing him. We do almost the same thing when we treat germ diseases. Antiseptics are commonly poisons and we use a quantity large enough to kill the germ without injuring the patient more than necessary.

Religion was exceedingly practical. They needed to know how to get the spirits to do things for them and not to injure them. The earliest worship was largely devil worship. What it all amounted to was

an attempt to keep on the good side of evil spirits.

Primitive man also made a beginning of art. He appreciated both form and color. His art was very much lacking in perspective, but he had an æsthetic sense, and he had the idea of symbolic representation.

All of these factors entered into their educational system. They did not have schools as we have but they had a body of knowledge, some of it very faulty, but it was theirs. This body was to be shared by all of the tribe. In addition to this there was the special body of knowledge possessed only by the intellectual leaders—medicine men, soothsayers, or whatever they might call the learned group. The method was the simple one of telling a person what he needed to know. However, two important factors must be added to this telling method. In the first place the pupil wanted to know what was told to him because it helped to fit him to the situation in which he was placed; secondly, the pupil immediately made use of the knowledge. Under these conditions they had no educational problems.

The main facts to be noted are these. Man lived in a primitive state for a very long time—many thousand years. During this time children learned from their elders to do as their elders did. This took care of the actual physical needs—at least enough of them to preserve the race. Gradually there grew up a thought life going somewhat beyond physical neces-

sities. Three factors were mainly responsible: curiosity, desire for superior adjustment, and the pleasure of mental activity. Without these there would have been no progress.

CHAPTER III

ORIENTAL EDUCATION

THE CHINESE

THE development of educational ideas and hence the development of civilization is one continuous story from the primitive people to the time of the Renaissance. Our main task is to follow that course. However, there have been, and still are other types of civilization from which we may learn much. We shall return very shortly to the primitive view point and continue from there through the course which the human mind must logically take. But before doing that we may briefly note some of the outstanding characteristics of other peoples. We need to note the contrast, and we shall note doctrines and practices which will make us reflect more carefully upon our own. We are very apt to accept our own notions as a matter of course and not stop to reflect seriously upon them.

We have sent missionaries to China, India and other countries to carry our views to them. These missionaries may have done some good. What we should do also is to send intelligent people with open minds to learn all that they can from those nations

which we think are so far behind. No doubt they are behind in many respects but that will not prevent us from learning much if we have the attitude of the learner. Our greatest fault has been that we judge everything from our point of view and we jump at conclusions without really understanding situations, or getting sufficient data.

For example it is commonly told in this country that when a Chinaman greets another, instead of shaking hands with him he shakes hands with himself. Nearly every one in America has smiled at the absurdity of this. The American thinks it is absurd just because he does not comprehend the performance. The Chinaman is not shaking hands with himself. To show his respect for the other person he clasps his own hands in front and makes a bow.

We see pictures of Chinese boys reciting their lessons while standing with their backs to the teacher. We think that is funny. We apologize for turning our backs to people. Why should we think that our faces are so attractive that every one wishes to look at them? Aren't we a bit conceited? Would it not be more modest to turn our faces away if by that we meant to indicate that we do not consider our faces so interesting and attractive that others will wish to look at them all of the time? There is a difference in point of view and in customs. That is all, and we should learn to judge other peoples fairly. Many such illustrations might be given, but space will not permit.

One other bit of caution may not be out of place. We think so highly of ourselves that we suppose every one who comes to this country will admire us greatly. Visitors usually do find much to admire and we hope they will continue to admire our achievements, but along with their admiration they may have other convictions which they do not very often express in public. A distinguished Chinese statesman after visiting this country and traveling from coast to coast was asked privately what he thought of the Americans. He said, "They are a very interesting people but they will never be civilized." The writer quoted that statement to a very scholarly Chinese who had spent several years in America and who had received degrees from two universities, and asked him what he thought of it. He said, "I think I know what he meant. I am inclined to agree with him." These men did not wish to be critical, and they are fond of American people, but they see things which we do not see. If we can get something of their point of view it will help us to judge ourselves, to evaluate our customs, theories, and practices, and perhaps we may profit thereby.

Before giving an account of Chinese education it may be well to compare their aims and ideals with American aims and ideals. We have looked to the future and emphasized progress. They have looked to the past and emphasized stability. The advantages are not all on the side of progress. We have strong inclinations toward individualism and personal lib-

erty. These have their advantages but it is difficult to combine them with stability. The effort to preserve things as they are, to keep to the sure and the tried instead of running to the new and the untried affords a steadying influence. At least the Chinese maintained a nation for more than five thousand years, preserved a fair amount of unity without a strong central government, and grew into a nation three times as large as the United States. They are held together by the power of their ideals rather than by the power of a government. Our job is to establish an enduring social order, while preserving as much as we can of our individualism.

A history of education for China would recount many varying views and changes in theories and practice. They had thinkers and movements as had the western world, but the dominating ideals of the race were summed up by Confucius about five hundred years B. C. His writings represented the accumulated wisdom of the centuries before him and provided a guide for the centuries which followed.

Material prosperity receives little consideration. Human relationships, morality, order, duty, these are the matters of prime importance. Human society embodies five fundamental relationships: sovereign and subject, father and son, husband and wife, brother and brother, and friend and friend. It will be noticed that property rights do not appear in this. It will be noticed also that in every case a reciprocal relationship is understood. Later we shall read in

the Roman law about the "right" of the father over the son, the "right" of the husband over the wife, and of other "rights." No such idea appears in the writings of Confucius. If a human being can maintain worthy, orderly, wholesome human relationships, i. e., an ethical attitude toward his fellows, he has fulfilled the law.

An attempt to cover even very meagerly all of the periods in the history of education in China would be a large task and it would require a whole volume. In this chapter just a few conceptions and practices have been selected for the purpose of helping us in our reflections about our own education.

For many centuries schools were provided by the government. But wars among the various divisions of China, and political changes led the government to give its attention to other matters and to give up its interest in education. It was then necessary for the people to provide education for themselves or go without. For a short period about two hundred years B. C. education was vigorously opposed by the rulers. It was against the law to carry books on the street or to talk about books. At one time several hundred scholars were buried alive. It took a few centuries to recover from this unfortunate condition. After a thousand years of ups and downs, during which time the art of printing was discovered, China was in better condition educationally. For a time there was a period which might be called a period of enlightenment, but for the most part rulers were

afraid of new ideas. A great thinker, Wang Yang-Ming, appeared about the time of the discovery of America. He advocated a type of education based upon the child's nature, and some of his utterances might well pass for quotations from nineteenth or twentieth century American educators. But he was far ahead of his time in his own country, and ahead of his time in the western world as well.

During the last half century many interesting movements have developed in China, and if the Chinese are given time and not too much interference from the western nations no doubt they will work out a system of education suited to advance their civilization. Great attention is being paid to adult education. In fact they have never thought of education as being something just for children.

In the paragraphs which follow a few of the outstanding practices are mentioned. The reader should not conclude that this tells the whole story of Chinese education.

During the best known periods the teachers were merely private teachers selected by those who wished their help in preparing for the state examinations. The government made out the questions and conducted the examinations. In that way the content of their education was determined. The rewards of arduous study were therefore sure. What their system amounted to was a well organized and efficient program for coaching students to take examinations.

The method of teaching was very simple. Since all

depended upon memory it was necessary only for the teacher to tell the pupils what to study and then listen to them recite verbatim what they had learned. The work of the schools was almost entirely memory. Instead of working to acquire speed in reading, as we sometimes do, they worked for speed of reciting. When a pupil had memorized a passage he recited it to the teacher with as much speed as possible. Concentration was secured by studying out loud. Since all of them studied out loud at the same time each must learn to concentrate on his own lines in spite of the noise of the group.

The best preparation for the affairs of government was thought to be a knowledge of the duties of daily life, and some literary ability. Science had a very subordinate place. Underlying all of their teaching was a philosophy which had to be learned, and the commentaries and expositions of the classics afforded an immense quantity of literature to be studied, and much to be memorized. They must also attain a style of writing in close imitation of the classic writers. The language of the schools was not the language of daily life. This was unfortunate and it is hard for us to understand why they used such a language instead of one which would fit into the lives of the masses of the people and improve them, but we know that in Europe and even in this country for many years the main part of the curriculum consisted of foreign languages.

Education was mainly for boys and men. There

was no age limit. Old men and boys might be in the same school studying the same things. Many thousands of people took the lowest examinations, and from them a few of the best were selected to take the next higher examinations. The same process of selection was carried on throughout the system till finally the very foremost scholar in the land was selected. The higher government positions were given to those who won in the highest examinations. The whole program was one of elimination of the large number and the selection of the few. Those who failed in one examination might continue to try indefinitely. One could spend his whole life in studying for and taking examinations. One of the striking features of the present tendency is that education is intended for all of the people. It is not thought of as something which belongs inside of school houses where only children go. Education is being carried to the people at times and in places most convenient to them. We are apt to think of education and schooling as being synonymous terms. Schools are very desirable and economical means of education but the majority of the people are outside of the schools and there are things they need to learn. This is especially true in China, and it is true in the United States.

THE HINDUS

A few words should be said about Hindu education because Hindu thought has made a profound

impression upon a considerable number of American people. It is very difficult, and probably impossible for an American to present satisfactorily the Hindu point of view. One reason that it has appealed so strongly to certain classes of American thinkers is that it is so different from both the common and the philosophical thought of America. Among the Hindus may be found differing philosophies and differing religions. To the outsider the differences are not so conspicuous as are the likenesses. It must be remembered that the social structure of India rests upon a very rigid caste system. Among the upper classes religion was a philosophy, among the lower classes it was mainly superstition. The practices and beliefs of the lower classes are not significant to us, and they will not be mentioned here.

Mysticism seems to dominate nearly all of the philosophical thinking of the Hindus. Mysticism is a way of looking at life. It regards life as a means of reaching an ultimate goal. To use the word ultimate in a comparative or superlative degree is not logical, but it would indicate the point of view if we should say that the mystic sets up for himself a more ultimate goal than we of the occident usually do. When we say something is good we mean good *for something*. We usually think that if a thing is not good for something it is good for nothing. But what of that ultimate good which is good in itself, not merely a means to something else? That is too far away for us. We are busy with things near at hand. We exalt

activity. But to be active means to strive for something, and striving for something is evidence of imperfection. The attainment of perfection would result in an end to striving, or a state of perfect rest. This is the Hindu Nirvana. The way to reach this blessed state is through worthiness. Worthiness is attained through self-control. This ideal is highly spiritual in contrast with our somewhat material ideals. The goal is not even personal or individual immortality, it is absorption into universal being. The soul goes forth not to be *with* God but to be *of* him. The immediate purpose then is to turn away from the world of sense and action and to attain to a state of pure meditation.

We sing and talk of "eternal rest." We repeat, "I shall be satisfied when I awake in His likeness." We show many mystical spots in our thinking, but rarely carry the concept through consistently to the final end. As an educational system it presents more of attitude than of knowledge. Its achievements are not such as show, or can be objectively measured. The average American calls the Hindu philosopher impractical, while the Hindu regards the American as spiritually and mentally inferior because he cannot comprehend this subtle philosophy. Which is right can hardly be decided by one who is by nature and training prejudiced.

THE PERSIANS

How much ancient Persia influenced the world intellectually it is not easy to say. There is found in their life much that resembles the Hebrew, much that resembles the Greek, and much that suggests the spirit of American life today.

The Persian education consisted of physical exercises and of ethical and religious beliefs. Truthfulness, justice, and courage were the virtues most emphasized. There were no specific educational institutions which we should call schools. The training was for the upper classes and was given mostly at the courts of the nobility by observation, imitation, and participation. We shall find similar practices and similar ideas during the period of chivalry in the middle ages. It was activity rather than reflection which appealed. They were not highly intellectual but they possessed a high spirit and a cheerfulness which makes them attractive. They laid little emphasis upon sin, and believed it was better never to see nor hear base things. In other words they preferred to look upon the bright side of things. In their religion they taught that there was one all-powerful God, with subordinate spirits. They recognized also an evil spirit. There seems to have been good feeling among them. Men were on good terms with one another, and there was confidence between rulers and subjects.

This presents the most attractive picture of national life to be found in antiquity. And yet the Persian Empire was very short lived, and with the decay of the empire the civilization and its influence came to an end. Why? We can only surmise. Their system of thought seemed fitted to success and not to failure. As soon as their government, their material possessions, and their means of enjoyment were lost there was nothing left. If a Hindu lost his possessions the goal of his life was untouched. If a Chinese lost his possessions he had left the unchangeable record of his family. The spirits of his ancestors were untouched and he still had something to live for. When the Hebrews lost their country the ideals of the race remained, and the way they have clung to them is one of the striking facts of history. The ancient Persian had only the joys and successes of the day and when these were gone the game was over.

In all of these oriental programs we find one outstanding common characteristic, and that is that education is a matter of spreading and fixing national ideals. It is a matter of building and preserving national life. It is not a matter of shutting children within the walls of a school room and by assigning more or less unrelated lessons preparing them for real life, which is outside the school. This does not mean that their systems were on the whole superior to ours, but it does mean that there is something we can learn from them.

CHAPTER IV

GREEK EDUCATION

EARLY PERIOD

THE early Greek people are especially interesting because they began in very simple, primitive life and developed a splendid civilization very rapidly, and almost entirely from within. They produced great philosophers, poets, artists, statesmen, whose works may well be studied today even though we may be in search for ideas of modern application.

In our discussion of primitive education we noticed that they made a beginning of science, literature, history, art, religion, and even some philosophy. The Greeks began with much the same notions held by more primitive people. In their science they asked the natural questions of any observer. What is the world made of, how was it made, who made it? While their answers were rather primitive the questions were questions of ontology, cosmology, and theology. Ontology considers the nature of being, cosmology considers the organization of the world, and theology the controlling spiritual force in the world. The serious study of these problems, what-

ever answers may be given, promotes civilization.

The Greek mind early became profoundly interested in the primary essence, or substance, out of which things are made. They could not go to the library and read what some one else had said about it. They had to look at the world and see what it seemed to be made of. It will help the reader to appreciate the problem if he will look at the world and see what it seems to him to be made of. It looks as if everything might have come from a modification of dirt. Trees, grass, vegetables, and everything we use either grows out of the dirt or is dug out of it. Even the air seems to be volatilized dirt. Water flows out of the earth in the form of springs or streams. A very good case may be made for earth as the primary substance out of which all things are made. This may remind us of the well known phrase, "Dust thou art; to dust return." On the other hand the earth, in the then known world, seemed to be floating around in the water. Beyond the earth there was endless water. Plant and animal life abound in the water. Every living thing dies when the water is removed. Water can easily turn into air, as is seen when we pour it on the ground or set some in a dish out of doors. Water must be the original substance out of which everything else developed. Such a statement may remind us of the statement of a famous biologist of our time. He said, "Whatever else life is, life is liquid." A good argument can be presented to show that air is the original substance out of

which all else is made. It is interesting to note that the Latin word "spiritus" was used to denote air, or life, or soul. It is the "breath of life" that makes life. Perhaps all things were made of something less material even than air. Perhaps there was a generating force which started the universe. Heat may have been that force. Activity at least comes from heat, and we are living in an active, dynamic world. Here we have a number of different theories.

After such notions were discussed for a long time a synthetic thinker appeared. He said the original substance was not one but four: earth, air, water, and heat. That should have satisfied everybody, but it didn't. The discussion continued, and it continues still. With the advance of knowledge it has become more subtle and more complex, but the human mind has not lost interest in the ultimate essence of things.

Not every one was interested in these problems, but every one was interested in people, more or less like himself. Stories of people were very popular. The one great writer of the early period was Homer. The *Iliad*, written about 900 B. C., is filled with human interest and insight. Probably it was not all written by one man, but whatever its authorship and whatever may be the date of composition of the various parts, it formed the main part of the Greek intellectual life for many centuries and it formed an important part always. It is usually regarded as one of the greatest literary works of all time. In recent centuries it is more talked about than read, but

among the early Greeks it furnished almost the entire curriculum. It served the purpose of history because it told the stories of the heroes of the people. It afforded literature because it was written in such an attractive style. It was memorized and chanted by persons who went about and recited to whosoever might care to listen. It was memorized by nearly every one who had sufficient intellectual interest to care for anything but actual physical necessities. Above all it presents the early Greek ideals. These ideals have been summed up under the two heads: judgment and action. The judgment required had reference mainly to affairs of state, and was exhibited at the councils. Action had reference mainly to warfare, and the skill developed was mainly skill in battle. Into the judgment went insight, shrewdness, and perhaps even craftiness. The welfare of the group was the primary consideration, but the standards of national honesty have never been so high as the standards of personal honesty. Along with the ideal of action went bravery as well as caution, and all of the mental attitudes which made action effective.

SPARTAN EDUCATION

The educational system of Sparta is unique. The constitution of Lycurgus, adopted during the ninth century B. C., was little more than a plan for the training and conduct of Spartan citizens. The strik-

ing feature is that they had a single aim and bent everything to it. The aim was the preservation of the state, and the sole duty of each individual was to serve the state. Girls were reared to be strong and healthy in order to insure a race of strong warriors. Boys were trained to be patriotic, courageous, shrewd, judicious, strong, hardy and skillful soldiers. Literature and art were luxuries and therefore had no place in the program. Even superfluous words were looked upon as being out of place. We still use the word laconic to mean expressing much in few words. (Laconian is another word for Spartan.) Until the age of seven a boy was cared for and trained by his mother. At that age he entered a public barracks and began the training which was to make him a soldier. The education was not given them by teachers, but boys who showed the qualities of leadership were placed in command over other boys. Thus they learned to command and to obey. The exercises were carried on under the supervision of older men, who carefully looked after everything that was done and attended to the reproof or punishment of the boy leaders if any of them used poor judgment in handling the boys in their charge. Thus every citizen was a teacher.

The gymnastic exercises were of a very practical sort. Beauty and grace had no place in their thought. Likewise their intellectual training was rigidly practical. Judgment about present-day affairs of state, quick thinking, and brief and pointed speaking con-

stituted almost the entire program. The boys themselves carried on political discussions. They got their questions and ideas by association with the elders, and by hearing them talk, not by sitting in school and listening to a teacher. One point must be noticed. The older people were willing to talk in a mature way to the boys. They talked to them on questions of importance instead of on trifling matters such as are too often used as subjects of conversation with children today.

There was little of refinement or pleasure in Spartan life. They were hard, severe, sometimes cruel. Women were given consideration equal to men. But this was not for the sake of the women. It was because women were needed to serve the state. The picture is not attractive to us, but it must have suited them. The system was continued with very little change for seven hundred years. In all of that time Sparta contributed nothing to the world except her rigid devotion to a single purpose.

ATHENIAN EDUCATION

The mention of Greece almost invariably calls to mind Athens. Military, financial, or governmental power Athens never had, but one might almost say that she has controlled the world by her intellectual power. The philosophy, literature and art which Athens contributed to the world has dominated the thinking of Europe and America for more than two

thousand years. While the Spartans were continuing the same course with little change the Athenians were developing very rapidly. The most interesting and fruitful period for study covers from about 500 B. C. to about 300 B. C. By way of preparation for this period we have the stories of Homer with their human interest and attractive literary style, the philosophical and scientific discussions of the early philosophers, the influence of surrounding countries, including Egypt and parts of Asia, the innate ability of the Greek people themselves, and the intellectual freedom which they enjoyed. This freedom was due partly to the fact that they did not have a religion which provided for them an authoritative, dogmatic system of thought to which they were required to subscribe. They were not only free to think as they chose but they must think things out for themselves or go without a system of thought.

During the period from 600 B. C. to 500 B. C. there were a number of profound thinkers, but naturally they did not all agree in their explanations of life and the universe. Evidently they had not discovered the ultimate truth about things. What then shall the common people think? If the ablest men in America should spend their best energies for more than a century hunting for the fountain of youth in Florida and could not find it the rest of us would conclude, no doubt, that it is not there. Just so with the Greeks who watched the search for reality. The philosophers could not find it, and hence the conclu-

sion was drawn that there was no such thing. One thinker summed up the philosophical situation by saying, "There is nothing, and if there were we could not know it, and if we knew it we could not tell it." Since truth is not to be discovered we shall have to be content with a substitute for it. The choice of a substitute will be determined by the needs of the times. In 509 B. C. a new political situation brought about great changes in the intellectual needs of the people. At this time Athens became a republic. Every citizen could now take part in affairs of government, and if he had ability enough he might expect political advancement. A republic always presents a peculiar combination of characteristics. First, it provides civic duties and responsibilities. These are social in their significance. Second, it provides an opportunity to follow personal interests and desires. The great task of a republic is to combine personal freedom and social order. To meet these new demands in Athens a new type of education was needed. The ability to speak in public, which means the possession of the kind of knowledge needed for public addresses and debates, together with skill to organize thought in a way to be convincing. It is a deplorable fact that public education always lags a number of years behind the needs of the people. A single modern illustration will suffice to make the point clear. The invention of the typewriter led to a great demand for shorthand, but it was a long time before the public schools would teach it. Business

colleges all over the country supplied the need until the public schools slowly became convinced that a knowledge of shorthand might be regarded as education. In Athens a new type of teachers appeared. They taught the people what they wanted to know. These teachers were called sophists. They taught public speaking and debate. They met the philosophical situation with an argument something like this: A diligent search for truth has been made without success. It is therefore useless to seek truth. Seek rather for what people will accept. This will at least bring success. *Man is the measure of all things.* Therefore satisfy man. These teachers traveled around among people and learned the ways and the thoughts of the world. They were continually on the look-out for information which could be used for a purpose. They emphasized the individualism of the time and neglected the requirements of the state. Personal success and not social order was the conscious objective. They advertised that they would teach their pupils to be successful. Some of them advertised that they could teach young men to be such good debaters that they could take the worse side of any question and still win. The strong appeal to the desire for personal advancement was much like the appeals made today by many of the managers of private concerns who claim to be able to teach pupils in a short time to reach whatever high pinnacle may be the object of their desire.

The sophists rendered a distinct service, but they

had one great weakness. They failed to see the basic social principles. Individualism without the steady force of public interest and social standards leads to disorder.

SOCRATES

Into this situation came a great thinker, Socrates. He lived from 470 to 399 B. C. During this period lived Pericles, the statesman; Æschylus, Sophocles, Euripides, and Aristophanes, the great dramatists; Phidias, the artist; Thucydides and Xenophon, historians; Gorgias, Protagoras and Antisthenes, philosophers; and many other brilliant men. There were also many sophists, active in teaching their doctrines. This was a very stimulating environment.

Socrates was by trade a sculptor, but he did not work much at the trade. His means were small but his needs were few. In his system of thought he began by accepting the sophist doctrine "man is the measure of all things." But he added that a good measure must be constant. If man is the measure he must be consistent. The criterion of truth is consistency. One may disagree with others but he must not disagree with himself. The essence of Socratic method is stimulating others to think and testing the validity of their thinking by the principle of consistency. Socrates never wrote a book, and never gave a lecture. He would ask a series of questions and compare the answers to see if they were consistent with

each other. Such a series of questions is still called by the name Socratic. *Memorable Thoughts of Socrates*, by Xenophon, or *The Republic*, by Plato, will afford good examples of the Socratic method.

Socrates did not believe in the study of science. He reasoned somewhat as follows: Men have long sought for scientific truth and have not found it. Evidently the gods do not wish men to discover the laws of nature, else they would not have hidden them. If the gods do not wish us to know these laws it is useless for us to try, and furthermore it would be impious for us to try to find out what the gods do not wish us to know. It is the business of man rather to know himself and to study his duty. The goal of thinking is to think "whole thoughts." It is the incomplete thought that is dangerous. This principle will be easier to grasp if we use a modern illustration. Suppose Mr. X likes coffee but it keeps him awake at night. He is attending a party in the evening. Coffee is served. It smells good, it would taste good, others are drinking it, it would be sociable for him to drink, the company is good, the young ladies passing the coffee are attractive. If these are the only considerations he thinks of he will drink. But there are other considerations. If he drinks it he will lie awake after he goes to bed, the next morning he will be tired, he will not be able to do his work well the next day, he will feel mean and perhaps act that way. The Socratic principle requires X to think this thing through and decide if the pleasure is worth the price.

The pleasure would be worth a half hour's sleep, it would be worth a whole hour's. Would it be worth three hours' sleep? That is for X to decide. If he thinks the matter through and decides on the basis of the "whole thought" then he is rational. If he looks at one side only and neglects the other he is not rational.

The writer once heard a man say, "I have no doubt that smoking will shorten my life by at least ten years, but I would rather have the pleasure of smoking and die sooner." He had thought it through and decided that smoking was worth ten years of life. He was therefore reasonable, whether we all agree with him or not. The writer knew also a college girl whose physician told her that if she continued to do some of the things she was in the habit of doing she would not live a year. She continued, and died without finishing her course in college. If she thought the matter through, and decided that one more year of fun was worth the price of her life she was reasonable. If she thought only of the pleasure of the moment and did not think of the rest she was not reasonable. This was what Socrates meant by thinking "whole thoughts." He spent the greater part of his life trying to teach the young men of Athens this principle, and at the end he submitted to execution in order to remain consistent to his own teaching. He was condemned to death unjustly. The officers of the law were willing to close their eyes while Socrates' friends helped him to escape. But he would not consent. All

of his life he had taught obedience to law, and for him to disobey the law in order to save his own life would not be consistent. Xenophon's *Memorable Thoughts of Socrates* gives a striking and fascinating account of the last conversation of Socrates before he drank the poison provided for his execution.

PLATO

Plato was a pupil of Socrates. If a scholar were to name the ten greatest thinkers who ever lived Plato would probably be one of them. Although he lived four hundred years before Christ many of his ideas are quite modern. His greatest book, and the one in which he outlines his plan of education is *The Republic*. It was not his purpose to write a treatise on education. He attempted to describe an ideal state, and education is given its place in the state. He shared the individualism of Greek thought, but he saw also the need of preserving the social order of the state. The purpose of *The Republic* was to present a plan for securing justice to all. In order to follow his thinking we must look carefully at his conception of justice. The most familiar conception of justice is the Hebrew, which is based upon the idea of balance. It is usually expressed by the phrase, "an eye for an eye, and a tooth for a tooth." Plato's idea had nothing to do with this. The only way that the idea of balance figured in Plato's conception was that he believed that there should be a balance between

the inborn capacities of an individual and what was expected of him. He believed that the only way to do justice to an individual is to allow him to do that which he can do best, and furthermore he should be trained by the state to do that for which he is best fitted by nature. Upon this idea he built his educational program. He recognized what we now call individual differences. He wished to start every child with equal opportunity, and then as soon as he showed a special aptitude for a particular field to train him according to that aptitude.

He regarded education as social in so far as it prepared an individual for service. It was individual in so far as the native capacity of the individual determined what service he should perform. Plato divided the citizens into three general classes based on the needs of the state. The state needs: first, producers—those who produce and handle all of the commodities needed; second, defenders—the soldiers who protect the state; third, rulers—wise men or women who spend their lives in studying problems of government. Native capacity determined to which class an individual belonged, but the requirements of the job determined the kind of training he should have after his native capacity was discovered. Those who were to govern should have many years of rigid, special training for the difficult task.

The child's first right is to be well born. In this the interests of the individual and of the state are in perfect harmony. The state needs citizens who are

well born. To secure this Plato recommended a system of eugenic marriages under state control. A board of experts should decide who should marry. Next to being well born the child needs scientific feeding and rearing. To secure this, new-born babes were to be taken at once to a state supported home where trained nurses and dietitians looked after their needs. As soon as the children were old enough trained teachers were to look after their mental development. Under this system no child had an advantage over another on account of the wealth or the prestige of his parents. As a guarantee that each should have full justice done Plato would provide that no parent should know his own child. He expected that all of the parents of children of a given age would be equally attached to all of the children. Thus no favors would be shown. If every parent could like every child as well as he likes his own, children would be well treated.

Plato was logical enough to apply his educational theories to girls as well as to boys. If native capacity is to determine what each is to do, and what kind of training each is to have, then the native capacity of girls should determine what they are to do. Some women are better fitted to be rulers than some men are. Plato expected to find more men in the ruling class than there were women, and he expected to find more men in the soldier class, but if a woman is fitted by nature to be a ruler or a soldier she should not be deprived on account of sex from doing

that which she can do best. Hence, the girls should have the same start as the boys, and as soon as the individual differences showed their capacities the training should be adapted to that capacity and the vocation selected accordingly.

While the idea of service was fundamental in Plato's scheme, he wished also to have all who could attain unto it reach a superior state of being and thinking. A life of study and contemplation constitutes the highest good for the individual. Philosophy—the search for profound truth—was the loftiest subject, and the love of truth the noblest attitude.

The philosophy of Plato figured very largely in the educational, theological, and philosophical discussions of the middle ages. His influence in the field of philosophy is strongly felt even yet.

XENOPHON

We should not pass Greek education without a few words about Xenophon, the historian, philosopher, and man of affairs. He wrote an essay on the education of girls, in which he suggested a regular course in home economics. The course included cooking, sewing, household management, the management of servants, lessons in practical economy and the wise use of money, the care of children, and everything that had to do with the making of a home and the rearing of a family. The main difference between his course and a modern course in home

economics is that today we have more knowledge of chemistry, bacteriology and other sciences upon which to base the study. To call him the father of home economics would sound queer, and surely we could not call him the mother of home economics, but we may call him the prophet of twentieth century home economics. It took the world more than two thousand years to realize the value of his suggestions.

ARISTOTLE

The greatest thinker after Plato was Aristotle. His essay on education has been lost, and therefore we do not have all of his educational theory. He wrote many books on sciences and had more learning than any man of his time. He wrote also on logic, ethics, and other philosophical subjects. His influence during the middle ages was greater than that of Plato. For several centuries his books were used as texts in the schools and universities. Upon his philosophy was based the orthodox theology of the Christian church. He was recognized as the authority on nearly everything intellectual. He was often referred to as "the master of those who know." A story is told of a teacher in one of the early universities who was asked by a student if there were spots on the sun. His answer was, "No, I have read the master through from beginning to end. He makes no mention of spots on the sun."

RESULTS

These few pages have given only a hint of the intellectual contributions of the Greek people before the time of Christ. As a result of the work of the philosophers schools of philosophy were established and they flourished. There were also schools of the rhetoricians, where literature, and all that is connected with it was taught, and schools of the sophists, where affairs of the day and whatever was thought to prepare for success was taught. By about 200 B. C. the intellectual forces of Athens were brought together and the University of Athens began. Athens was the intellectual center of the world for a long time, even after the conquest of Greece by the Romans. Similar universities were established in other cities around the eastern end of the Mediterranean. The middle ages made a break in the continuity but the work of those universities was not lost to the world.

CHAPTER V

ROMAN EDUCATION

THE intellectual contributions of the Romans are not comparable to those of the Greeks. The Romans taught the world the principles of Government. The educational history of Rome has a few lessons for us. For a brief study such as this we may divide their history into three periods: the early period extending from the founding of the city in the eighth century B. C. to the third century B. C.; the literary period extending from the third century B. C. to the first century A. D.; the period of decline extending from the first century A. D. to the third century A. D. These dates should not be regarded as accurate. They are intended to suggest approximately the periods under consideration. Just when Rome began to decline it is not possible to say. There were influences tending toward decline long before the date here given. The first of these periods may be called the period of industry, the second the period of wealth, and the third the period of idleness.

The very early history of Rome presents, as we should expect, a mixture of fact, fiction, and myth. Myths frequently represent national ideals better than facts. One of the very early and familiar stories

is that of the building of the first wall around the newly made city. Romulus built the wall and then, either in sport or derision, Remus jumped over it. Romulus killed him immediately. The lesson is obvious: So be it ever to any one who defies Rome. Another familiar story is that of the Sabine women. Rome needed women. Neighboring people were invited to come to Rome for a celebration and to bring their families. While the games were in progress the Romans attacked their visitors and took their wives and daughters and kept them. The lesson of this is also obvious: What the state needs it is lawful for the state to get. These two stories represent the three fundamental ideals of Rome—build, grow, expand.

The education of the individual was adapted to the ideals of the state. The training during the early period was carried on in the home. At first children were instructed by their parents, and later in a few wealthy families by tutors, who were usually slaves. There were no schools as we know them. There was no Roman literature, and reading and writing were little needed. The training was moral and civic. Both boys and girls were taught to be devoted to the state and to be ready to serve it. For the boys this meant to be ready to serve as soldiers and to be interested in public affairs. Obedience, industry, honesty, prudence, fortitude were impressed upon the minds of the young by precept, by example, and by required practice. The Roman was always practical and mat-

ter of fact in his thinking. He lacked entirely the imagination, the emotion, and the versatility of the Greek. There is not much of interest in the Roman program until after the adoption of the laws of the Twelve Tables in 450 B. C.

These laws constitute Rome's great contribution to civilization. To be sure the "Golden Age" comes much later, but Rome's intellectual gold was mostly imported from Greece. The laws were Roman. They are based upon a rigid conception of justice, unsoftened by mercy. They are direct and logical, and deal with the situations which a citizen meets in the conduct of his private and public affairs. Centuries of warfare impressed upon the Romans the military organization. The purpose of the law was to define and make clear the *rights* of each person under Roman control and protection. The rights recognized were: (1) the right of the father over his children; (2) the right of the husband over his wife; (3) the right of the master over his slaves; (4) the right of a freeman over another through contract or forfeiture; (5) the right of a man over his property. It is to be noted that in all of these there is a right *over*. There is no idea of reciprocal relationship such as is found in the five fundamental relations of the Chinese code.

The laws are thoroughly logical and for the most part reasonable. From our point of view it is sometimes unreasonable to be rigidly logical. A single example from the Roman law may serve to illustrate

this. If a man owed another and did not pay, the creditor could take all the debtor had, and if he did not have enough to pay the full amount the creditor could take the man himself for a slave. So far the logic is easy and simple, but suppose one man had two creditors and did not have enough to pay them. Which should take the man? The logical thing is to cut him in two and each take part. Such was the Roman law. The reader must not get the impression that all of the Roman laws were cruel or even severe. For the most part they were just and necessary. The student is advised to read some extracts from the laws. A convenient place to find them is in Monroe's *Source-Book in Greek and Roman Education*.

After the laws were adopted the Roman youth was expected to learn them and to understand them. This constituted the major part of his education. This was his training in citizenship. It was also a training in clear, practical thinking. Along with the study of the laws the Roman boy learned about the deeds of men of his own country, especially men of his own time. He was encouraged to take these great men as examples to be followed. He was not expected to live up to an abstract ideal, but rather to copy a real person who had done some things which could be imitated. This use of real people as object lessons was used in much the same way in Sparta and during the same period.

During the third century B. C. the Greek influence became noticeable. Greek teachers, many of them

slaves to the Romans, began to teach Roman boys language and literature. This innovation received much criticism from stable and influential Romans. Language study deals with forms rather than content, and it is necessarily somewhat superficial. To the Roman who was accustomed to a serious study of real life this seemed trifling. The two most common names for school were *ludus*, meaning play; and *schola*, meaning leisure. Neither of these ideas appealed to the austere, practical Roman. But Rome was growing wealthy, and the lighter things of life were attractive. The laws of the Twelve Tables were not very thrilling. They were interesting on account of their practical use but they were not attractive. Greek literature had beauty, interest, dramatic excitement, fascinating style. The laws were fit to work with; grammar, rhetoric and dialectic could be used to play with.

The above paragraph gives one side of the picture. There is another. During this period great men were produced, men whose names are known everywhere among educated people. Cato, Cicero, Virgil, Cæsar, Ovid, Seneca, Horace, Quintilian and many other familiar names might be mentioned. These men could think, talk and write well. Their ideals were good for their period. They upheld such virtues as are recognized still. Where was the weakness? They reached only a few people. It never occurred to them that Rome could be saved only by raising the whole mass of people. While Virgil and

Horace were producing poetry of the first order, and while Cicero was writing philosophical essays and delivering brilliant orations the great mass of Roman people were becoming more and more decadent. A nation is not saved by its brilliant people. The level of the entire mass of population determines its character. There is a law of physics which tells us that to move a small mass a long distance is equivalent to moving a large mass a short distance. A similar formula is sometimes applied to social conditions, but when the welfare of a nation is at stake the safer course is to raise the level of the whole mass even though it be but little. The leaders of Rome did not realize this. Hence Rome decayed.

The period of decline offers little of interest except in so far as it afforded a situation which influenced Christianity. The decline was, no doubt, due largely to economic and political causes but these factors do not come within our field at present, except that later we must notice their influence upon Christianity. The Romans at this period had libraries. They had art and literature and philosophy. Unfortunately they also had wealth. With their wealth they were able to turn their art into extravagance and gaudiness and display. They turned their literature into thrills and excitement which could be maintained only by the sordid. They turned their philosophy into excuses for leading the lives they wished to lead for the sake of the pleasure of the moment. Objectives, or goals or ideals they had

none. Their education failed in that it did not keep these before the youth. During the early period they were chiefly concerned with the building of characters. During the decline they built nothing. A cultural education which is its own excuse for being and which has no objective beyond itself may well give us pause. Even the beauty which is its own excuse for being should look at something besides the mirror.

CHAPTER VI

THE EARLY CHRISTIAN PERIOD

IT must be kept in mind that Christianity was a reform movement, and all reforms are made in part out of the evils they wish to correct or eradicate. The sins of the Romans determined a great part of the Christian teachings. Just as in our day the prohibition movement was due as much to the drunken sot who rolled in the gutter, or went home and beat his wife and children, as it was to the W. C. T. U. and other organizations working for temperance.

To understand Christianity we must look at the sins of the Romans and other pagans and at the causes of these sins. The Christian doctrine was very rigid but very logical. The basal proposition was, to prevent sin remove the cause. Another basal proposition was, to control men you must control their thoughts. As a man thinketh so is he. The world of real values is a spiritual world. The entire program was educational. Only a comparatively small part of it was carried on in schools, but we do not think of education as being synonymous with schooling. Schooling is one means of education but there are many other means. There is now a tendency to de-

pend too much on the schools for education. Christianity aimed to educate all people of all ages and all conditions. We must give the founders much credit for this, especially as they lived in a period when education was very limited.

The decline of Rome involved many factors, and no doubt it was due to many causes. We shall not attempt to review all of the phases of the decline. It will be sufficient for us to note a few of the moral features. The Roman had given himself up to pleasure, and he was not ashamed of his vices. If he could afford "splendid vices" he was proud of them. If he could not afford the splendor he indulged in the vice anyway because he knew no reason for restraint. It is not necessary to enumerate the vices. Wealth plus self-indulgence without restraint almost tells the story. Greed and immediate pleasure determined their actions.

The leading thinkers of Rome had given the people a very good ethical code, but they had not followed it. Lofty ideals and a noble philosophy of life had been carried over from Greece, but these had failed to function and were almost forgotten. One difficulty was that only the most intellectual could understand. Philosophy is for the few and not for the many. There were Roman virtues, and no doubt some persons upheld the virtues. Duty was always held in esteem, but duty as an abstraction does not carry us very far. What about the particular duties? The Roman did not have very many. Duty to the

state stood first. Courage, strength, efficiency, keenness, endurance, self assertion and pride were all commendable. The desire for power may be good or it may be bad, but it controlled much of Roman action.

Into such a world as this came a new influence. To undertake to reform such a world took courage and faith and devotion. They must substitute good for the prevailing evil. This applied to conduct, to belief, and to attitudes. A new set of virtues took the place of the virtues of the Romans.

To the Christian the three great sources of evil were the world, the flesh, and the devil. Men should be taught to renounce the world, subdue the flesh, and escape the devil. This required a moral education so thoroughgoing that little else could be included in their program. Why should anything else be included? The one purpose was to save their own souls and the souls of as many of their fellow men as they could. The aim of education was regeneration for the purpose of salvation.

The early Christians have not been given enough credit for their educational theory and methods. They may have gone to extremes in some things but their pedagogical insight was marvelous. Thoughts as well as actions may be sinful. Bad thoughts will be kept out by an abundant supply of good ones.

“Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any

virtue, and if there be any praise, think on these things." (Phil. 4, 8.) This principle was carried through their teachings.

The power of motives was well understood. The common people need a motive which appeals to feeling rather than to pure intellect. A future life with joys beyond description for those who merit it was offered as a positive stimulus to goodness, and a future of inconceivable torments was offered to those who fell short of the standard.

Eye hath not seen nor ear heard, neither hath entered into the heart of man, the things which God hath prepared for them that love him. (I Cor. 2, 9.)

The sufferings of the present time are not worthy to be compared to the glory which shall be revealed in us. (Rom. 8, 18.)

Our light affliction which is but for a moment worketh for us a far more exceeding and eternal weight of glory. (II Cor. 4, 17.)

Great is your reward in heaven. (Matt. 5, 12.)

In my Father's house are many mansions. (John 14, 1.)

An inheritance incorruptible and undefiled, and that fadeth not away, reserved in heaven for you. (I Peter 1, 4.)

And there shall be no night there . . . and they shall reign for ever and ever. (Rev. 22, 5.)

For the wicked:

There shall be wailing and gnashing of teeth. (Matt. 13, 42.)

Depart from me ye cursed into everlasting fire. (Matt. 25, 41.)

And he shall be tormented with fire and brimstone. (Rev. 14, 10.)

And whosoever was not found written in the book of life was cast into the lake of fire. (Rev. 20, 15.)

This program of motives was as new as it was impressive. It made an appeal to the masses in a way that the philosophy of the Greeks could not. Motivation occupied a very large place in the method of teaching.

Another pedagogical principle which the Christians recognized and applied was the principle of direct and immediate application of that which was learned.

Those things which ye have both learned, and received, and heard, and seen in me, do. (Phil. 4, 9.)

In the early religions the main thought was to please the good spirits and to appease the evil ones, in order to get the best results for the individual concerned. It was a long time before it occurred to any one that the way to please God was to be good. The Christians taught this but they also went further and taught that the way to be good is to do good to God's creatures.

And whosoever shall give to drink unto one of these little ones a cup of cold water only in the name of a disciple, verily, I say unto you, he shall in no wise lose his reward. (Matt. 10, 42.)

Here is the doctrine of service combined with the idea of reward.

The content of their teaching may be briefly sum-

marized. The aim is to escape the devil, serve God, and secure the reward for the faithful. To secure regeneration and to develop a love of God it is necessary to change tastes entirely. "The flesh lusteth against the Spirit and the Spirit against the flesh." (Gal. 5, 17.) A new order of thinking, feeling and acting is required. These three must all go together in harmony. This is another good pedagogical principle. "If we live in the Spirit let us also walk in the Spirit." (Gal. 5, 25.) "Walk" is a figurative term to denote our entire conduct. It is not possible to separate conduct from our thought life.

It is necessary to turn away from all distractions. "If any man love the world the love of the Father is not in him." Wealth had been one of the causes of the downfall of Rome, and besides if we have it it will occupy our minds and keep us from thinking of higher things. Therefore, "Woe unto you who are rich." (Luke 6, 24.) "They that will be rich fall into temptation and a snare and into many foolish and hurtful lusts which drown men in destruction and perdition . . . but thou man of God flee these things." (Tim. 6, 9.) "Whosoever he be of you that forsaketh not all that he hath he cannot be my disciple." (Luke 14, 33.)

Likewise family attachments interfere with complete devotion of thought and action to the one great goal. "Everyone that hath forsaken houses, or brethren, or sisters, or father, or mother, or wife, or chil-

dren for my name's sake shall receive an hundred fold and shall inherit everlasting life." (Matt. 19, 29.)

Learning of the worldly sort was also dangerous, because we might come to trust in our own wisdom. "I will destroy the wisdom of the wise, and will bring to nothing the understanding of the prudent." (I Cor. 1, 19.) "That your faith should not stand in the wisdom of men, but in the power of God." (I Cor. 2, 5.) "Hath not God made foolish the wisdom of this world?" (I Cor. 1, 20.)

Such singleness of purpose has never been known unless possibly in Sparta, where the purpose itself was entirely different. Pleasures, reputation, and even a clear conscience must give way, since they interfere with the one great undertaking. "Woe unto you that laugh." "Woe unto you when all men shall speak well of you." A clear conscience takes away the feeling of sinfulness. A prayer of the Publican, "Have mercy on me a sinner," was approved rather than the prayer of the Pharisee, "I thank thee that I am not as other men are." The Christian attitude was well summed up in John 12, 25. "He that loveth his life shall lose it; and he that hateth his life in this world shall keep it unto life eternal."

Such was the beginning of Christianity, and it has been slow to change, but even though they have come slowly the changes have been many and great. It will be our task to follow for a little while these changes. Christian doctrines dominated education

for something like one and a half thousand years, and they continue to have a profound influence even to the present day. What Christianity has done for the improvement of moral life will not be recited here. We are concerned with the intellectual development.

The early church conducted schools for teaching the simple elements of their doctrine. These schools were much like the Sunday Schools of today. The pupils did not go to school and remain all day for five days in the week as they do now in our public schools under paid teachers. They met at certain times and were taught by the older people. During the second century more advanced schools were established under the leadership of Greek scholars who had been converted to Christianity. Naturally these teachers included in their teaching some Greek learning, and the changes in Christianity began. Not, however, without a struggle. A long continued and bitter struggle was waged between those who maintained that there was some good in pagan learning and those who maintained that all things pagan must be avoided. For the most part it was the church in western Europe that opposed the pagan learning. The classical influence was more noticeable in the east, and philosophy was accepted along with the Christian doctrines.

During the third and fourth centuries a fairly complete organization of the church was effected and the doctrines of the church were formulated. The

governmental organization of the church will not concern us at present. The formulation of doctrines had great influence upon the intellectual life of the times. Theology is made out of religion and philosophy and it cannot be made out of anything else. It was necessary for the church to take pagan philosophy and adapt it to its own purposes and convictions or make a philosophy of its own. It was quite impossible for those who had been trained in Greek philosophy to make a new philosophy without being influenced by their training. From the very beginning they took some pagan philosophy. Stoicism, as taught by Socrates and others fitted very well with Christian doctrine. Stoicism has remained the foundation of Christian ethics. Gradually the writings of Plato and Aristotle became known and upon these the theology was based. Theology is, however, mainly for the clergy. A theory of conduct for a practical church layman does not require the subtlety of these philosophers. For the common man stoicism is easy to understand. We shall have much more to do with these Greek thinkers in a later chapter. During the first three centuries the writings were mainly manuals of worship and general conduct, essays against paganism, and discourses defending Christians, their practices and beliefs. For students of political and religious history the period is very interesting but since our concern is with the intellectual development we shall pass to a more interesting period.

CHAPTER VII

MONASTICISM

WHILE an ignorant world was fighting, struggling, suffering, sinning, Christianity was slowly spreading its plan of salvation. The power of the gospel was greatly strengthened by the emphasis placed upon future rewards and punishment. Rulers of large and small domains were converted, at least in outward form, to Christianity, and they gave physical allegiance to the church. The story of progress along these lines is interesting as history, but for our purposes we shall find more of value if we enter a monastery.

You young students in the twentieth century are not well adapted to the monastic life and monastic ideals. Perhaps you remember how the half-witted boy found the cow (mentioned in Chapter I). Let us go back in thought, and so far as possible in attitude, to about the fourth or fifth century and ask ourselves what we should do and think if we were there living under the conditions of that time and with the intellectual background of a good Christian. You must be a very devout man, interested almost solely in acquiring a spiritual state which will secure the salvation of your own soul. You must, with all your

heart desire to overcome the world, the flesh and the devil. The world was filled with corruption beyond description. The story of life outside the monasteries is a story of dissention, intrigue, conspiracy, treachery, fraud, drunkenness, violence, debauchery, and murder.

If right now there were a deadly contagious disease among us, and if ninety per cent of the people were afflicted with it, and if the people afflicted were not only not trying to keep us from getting it but were freely exposing us, what should we do? Probably the safest thing for us to do would be to shut ourselves away from those who have the disease. Sin is one of the most contagious diseases ever known. It is likewise most deadly. Perhaps it will be safer if we enter a monastery. The world we can leave behind. This means all worldly possessions, including the family, and everything that can in any way tend to keep our thoughts away from holy matters. Above all, women must be kept out. If one is very careful he will not even look upon his own mother. Poverty, chastity and obedience are enjoined upon all.

The devil we cannot shut out. By shutting out all worldly interests and possessions we can deprive him of the tools he uses to tempt us. That will help greatly, but we shall depend mainly on the faith in the Savior to protect us from the devil.

How shall we protect ourselves from the flesh? We cannot leave that out. It is always with us. All

that we can do is to make every effort to subdue the desires of the flesh.

I find then a law, that when I would do good, evil is present with me. For I delight in the law of God after the inward man, but I see another law in my members, warring against the law of my mind, and bringing me into captivity to the law of sin which is in my members. O, wretched man that I am! who shall deliver me from the body of this death? (Rom. 7, 21-24.)

Subduing the flesh was carried to an extreme. Not only was self denial practiced but self torture. The story of self torture is a long and harrowing one. Our task of following the intellectual development will be much pleasanter.

Men were not in monasteries long until it was found that they could not put in all of their time in prayer and meditation without meditating more or less on wrong things. The phrase, "Satan finds some mischief still for idle hands to do" may not have been known to them, but some of the leaders did get that thought. Manual labor was introduced mainly because it had a steadying influence. Out of door work was not always feasible and copying manuscripts became common, and with that began the intellectual development. They copied the Bible, the Lives of the Saints, and other religious writings. This activity proved very profitable. It gave the monks religious matters to think about and it provided more copies of the books. Since printing was not known then books were very scarce. One of the great contribu-

tions of the monasteries was the preserving of literature both by copying and storing. Without this service no doubt many valuable works would have been lost to the world.

In order to be good copyists some education was necessary. Hence the monks were taught to read and write and to some extent to understand. As they copied they thought, and as they thought they sometimes thought something more than was expressed by the manuscript. Of course the amount of learning varied among the monks. Some were very scholarly for the times and some knew almost nothing. In some monasteries learning was more in favor than in others. In the beginning only the Bible and books dealing with the Christian religion were copied or read. To read classical literature would be giving up to personal pleasure. Still, in some places pagan writings were brought in. The monks discussed religious matters and they began to have problems. Problems are good for intellectual advancement but they are not good for stability of doctrine. The learning of the ancients gradually crept in. While religion continued to be the dominant interest a curriculum commonly called the Seven Liberal Arts was in use. These seven were divided into two groups called the trivium and the quadrivium. From these two groups grew our divisions of arts and sciences in use today.

The trivium included grammar, rhetoric and dialectic; and the quadrivium included arithmetic, ge-

ometry, music, and astronomy. A much wider range of material was included in each of these subjects than would be included under the same title today. For example the word geometry means a measure of the earth. It was therefore natural to include in that subject much of what we now call geography.

There were many men who became prominent teachers and writers on religious and educational subjects, but a single one may suffice for a sample. A short study of the work of Isidore, who was living in the year 600, will afford us some information about the period and also some food for thought. He wrote a sort of cyclopedia of all knowledge, and in this we find a very broad curriculum for that time. He took the knowledge available and organized it in what seemed to him to be the most natural way, putting together those things which according to their interests belong together. The way subjects are put together now is partly arbitrary, partly a matter of convenience, partly traditional, and perhaps partly logical and necessary. Isidore had very little to go by. He took what he thought was the sum of human knowledge and classified it. The titles of some of his books will indicate the lines of interest. Here are a few: *On Medicine and Libraries; On Languages, Peoples, etc.; On Man; The World and Its Parts; On Political Geography, Public Buildings, Land Surveying, and Road Making; On Ships and Houses, Dress and Personal Adornment*. Some of these combinations seem to us a little odd. For instance, with

us road making goes with engineering, because it takes engineering knowledge to know how to build good roads, but road making is also a political problem as is also public buildings. Why ships and houses should go with dress and personal adornment is not quite so clear, but that depends entirely upon the point of view from which they are studied. The main point to notice is that things may be studied from various points of view and the point of view determines the arrangement of the curriculum. Isidore's work is interesting mainly as a curriculum study.

From about the fourth to about the eleventh centuries monastic life and thought changed very slowly. The idea prevailed that education is discipline. Physical torture grew less common and less severe, asceticism grew less rigid, new ideas were tolerated within narrow limits, and thus their intellectual interests broadened. Also heresies appeared. Tolerance has never been a Christian virtue. It was believed that one is damned as readily for his beliefs as for his conduct. To believe error is as much a sin as to do wrong. Therefore since wrong belief is sin it cannot be tolerated. Heretics were punished, sometimes even with death. Still heresies grew. Neither persecution nor execution could stop it. The only way to combat an idea is to meet it with another idea which is stronger. Men must be convinced, not forced. Here was a new idea and it proved to be an epoch-making one. To convince, it was necessary to reason. To reason successfully one needs much

learning within the field of the argument. A new motive for learning was found. It proved effective and the result was the method of reasoning called Scholasticism. Logically we should proceed to this period at once but chronologically there are two other movements which come first. We shall leave the monasteries for a short time just as we have arrived at the most interesting period but we shall come back and begin again just where we are leaving off. In the year 800 Charles the Great was living. His educational enterprise is worthy of consideration. Also the institution of chivalry made a large contribution to human progress and deserves consideration.

CHAPTER VIII

CHARLEMAGNE AND ALCUIN

CHARLEMAGNE was one of the most remarkable men of all time. He was born in the eighth century when central and western Europe was inhabited by men whose ignorance and superstition was almost beyond belief. Many of the priests could neither read nor write. The intellectual life of the common people was confined almost entirely to superstition and supernatural terrors of the most absurd sort. Had they been less intellectual they might have been happier, because then they would not have been troubled with horrible imaginings. They could have lived, fought, and died, and that would have been the whole story.

However, the ability to think up absurd things is sufficient evidence of the ability to think better things under more favorable circumstances. Charlemagne came into this densely ignorant world, established an empire and ruled it with far more justice and efficiency than one could expect. His political achievements we shall pass by and look only at his educational program. For him to have any kind of an educational program would be remarkable, but for

a man under such conditions to work out so complete a program is remarkable beyond expression.

After he had established a great empire politically and geographically he realized that if peoples are to be in reality united they must have some community of intellectual life. Though Charlemagne himself could not write and had but little learning he desired that all people in his empire should be educated. The methods he adopted to bring this about show a wisdom which seems almost to have been inspired. To have organized a system of public schools such as we know would have been altogether impossible. Where would he get teachers and administrators? The monasteries contained about all of the education there was, and they were well organized and well distributed over the empire. Charlemagne used these to their fullest capacity and he tried to use them beyond their capacity. Had the monks been better educated, and if more of them had been educated, the results would have been much better and more lasting.

Charlemagne's wisdom was further shown by calling the man who had the reputation of being the most learned man in Europe to take charge of education. He secured the services of Alcuin to outline the entire program and to put it into execution. This was a great undertaking for Alcuin. It was necessary to teach the teachers what to teach as well as how to teach it. Lessons must be prepared. People who had never thought of such a thing must be induced

to study. For this Charlemagne's influence was exerted in two ways. First, he sent out orders to all of the clergy in the empire commanding them in a most tactful way to teach the people, and, if need be in order to do it, to get an education themselves. Secondly, he established a school at his own palace and attended school himself. Furthermore he was a good pupil. He wanted to learn everything. The members of his own family and the members of the nobility about the court also were required to attend school. The Palace School was thus an example to all of the rest. If any one wishes to maintain that Charlemagne was inspired he can make out as good a case for him as for any man who ever lived. As a rule when we look back at the actions of men it seems that they did what we should expect them to do. When we look back at the deeds of Charlemagne we find just what we should not have expected.

With Alcuin the case is somewhat different. He was the product of his times and his training. He was a great scholar of the type produced in the eighth century. He had a wonderful opportunity, but with his background he could not be expected to see it. He tried to take his own kind of learning to the people. He did not look at them to see what they needed, or what they could learn. He did not realize that they neither would nor could think as he thought. If he had tried to lead them from where they were to a somewhat higher level of thinking, with the forceful help of Charlemagne, probably he

could have accomplished wonderful and lasting results.

Alcuin was educated in a cathedral school in York. His first lessons were on the Bible written in Latin. Later he studied the Latin and Greek authors, and he enjoyed intellectual activity for its own sake and for the sake of religion. He no doubt expressed himself and his attitude when he said, "How agreeable a study is arithmetic, how necessary it is for understanding the holy scriptures." He had a strong personality and made other people enjoy what he enjoyed. He seemed to have no idea of adding to the sum of human knowledge, but he thought rather of preserving and distributing what was already known. He understood the fascination of a problem to an intellectually inclined person, but the problems he used were problems for their own sake only. For example, when a ploughman goes back and forth across a field how many furrows has he made when he has turned three times at each end. It requires a certain amount of brightness to figure out whether it is six or seven, but after one has figured it out he is no better off except that he has had the fun of solving a problem. We enjoy such problems yet, but if a large part of our lessons were of that sort we could hardly justify the time spent in school. Puns and other plays on words took up a large proportion of the time. Such lessons accomplished one purpose often sought now. That is the elimination of the unfit (the unfit for that). Only the highly intellectual,

those who are bound to use their brains anyway regardless of what they use them on, will continue to study and finish the work.

The favorite method of the time, the catechetical, was used. Questions and answers, with the answers memorized, was about the only method adapted to the material. These few examples may illustrate the type of lesson :

Q. What is writing?

A. The custodian of history.

Q. What is speech?

A. The interpreter of the soul.

Q. What is life?

A. The joy of the good, the sorrow of the evil, the expectation of death.

Q. What is death?

A. An inevitable event, an uncertain journey, a subject of weeping to the living, the fulfillment of wills, the thief of men.

Q. What is man?

A. The slave of death, a transient traveler, a host in his dwelling.

Q. What is man like?

A. Like a fruit tree.

Q. How is he placed?

A. Like a lantern exposed to the wind.

Q. Where is he placed?

A. Between six walls.

Q. Which are they?

A. Above, below, before, behind, right, left.

Q. What is the head?

A. The top of the body.

Q. What is the body?

A. The domicile of the soul.

Q. What is the sun?

A. The splendor of the universe, the beauty of the sky, the glory of the day, the distributor of the hours.

Q. What is the moon?

A. The eye of night, the dispenser of dew, the prophet of storms.

Q. What is rain?

A. The reservoir of the earth, the mother of the fruits.

Q. What is autumn?

A. The barn of the year.

If a pupil will keep up interest in a lesson like that when continued at great length it is a sure sign that he is intellectual.

The empire of Charlemagne was short lived, mainly for political reasons. However, if the education which had been passed out had got a hold on the people a change in government would not have put an end to it. Battles change border lines and sometimes make governments but they do not make men. The men of Charlemagne's empire went on. Why did they not preserve and develop their education? Simply because it did not educate. Memorizing lessons is not education. The pupils were given words but not life. To be sure, the lessons prepared by Alcuin made for him an abundant life, but not so with the pupils. Alcuin did not know people. He went to the empire with a ready prepared system of knowledge and tried to give that to the people. If he had gone to them to see what they needed to raise

them to a little higher level he might have been more successful.

The revival of learning under Charles the Great affords a striking example of a great enterprise, well conceived and well started, which failed because of a lack of insight into human nature. Smaller enterprises often fail for the same reason.

In spite of these criticisms it must not be inferred that the work of Charlemagne and Alcuin was an entire failure. The educational system was abandoned but whatever men learned was in part remembered, and there was a general intellectual awakening. This awakening no doubt contributed to the later educational advancement.

CHAPTER IX

CHIVALRY

CHIVALRY was partly the outgrowth of feudalism. At least many of the features of feudalism were carried into chivalry. Chivalry might be described as feudalism refined by a certain degree of unselfishness, glorified by a type of spirituality and idealism, and permeated by a conception of Christianity held during the later middle ages.

The monks lived mainly apart from the world. Only a comparatively few people are temperamentally suited to this sort of life. Those inclined to activity would not go into a monastery. Aside from the day labors of the serfs, the chief activity consisted of fighting either in battle or in private quarrels. To the freeman, therefore, there were two alternatives offered: Go into a monastery and meditate, or stay out and fight. It is not to be expected that one brought up in this atmosphere would think up an entirely new order of things. Furthermore if he did think up a new order he could not get people interested in his program. The more rational thing to do was to take the world as it was and try to make it a little better. This was the task of chivalry.

We may think of chivalry as an institution or as a spirit. As a spirit it is as old as civilization, and it exists today. As an institution we may think of it as belonging between the tenth and fifteenth centuries. In either sense it has contributed much to the world's progress. In fact it is difficult to see how the world could have got along without it. Chivalry tried to take what good there was in an ignorant, brutal, selfish, unprincipled, fighting society and make over the bad part in such a way as to bring about a Christian world according to the tenth-century conception of Christianity. The greatest virtue of the times was courage. The most useful attainment was the ability to fight. The ideals and manner of life practiced and advocated by Christ and his immediate followers could not be comprehended by the great mass of beings inhabiting the earth. They could understand being heroic. Heroism is praiseworthy. The difference between a hero and a bully is mainly difference in the motive which actuates him. If the courage and the fighting instinct could be put to some good use the world would be better. This made a good start, and it was the task of chivalry to find some virtues which would harmonize with these. The desire for glory is a powerful motive. People still are willing to risk their lives and even lose them for glory. There had been no glory in the fights. Chivalry offered something glorious to fight for. Something particular, tangible, and personal serves as an objective much better than does an abstract

principle. Love, war, and religion are more spectacular than labor, thought, and morality.

With this setting what ideals would you choose for knighthood? It must be remembered that democratic feelings did not exist, that knights belonged to the aristocratic class, and that they were proud of their station. The early Christian self-renunciation and humility had been entirely forgotten. Even though the knight regarded himself as a Christian there was not much of real Christianity in his thought. His idea of service came more from the requirements of feudalism than from the ideals of the Christian religion. He was attached to an overlord, but not as a servant. Society still makes a nice and rather fine distinction between being a servant and rendering service without being a servant. The knight had a sense of duty and feeling of obligation. He attached these feelings to God, to his lord and to his lady. He did not do much for God, he sometimes fought for his lord, and what he did for his lady is a good subject for debate. He showed her respect, artificial and superficial. He put her on a pedestal and left her there. She was an object of admiration and to some extent of adoration. Nothing was required of her, but what the knight did was done as if in her sight, and sometimes in the tournaments he actually fought in her sight. All of this may seem trifling but it possessed a real value. It developed an attitude which the world needed. As a maxim of conduct the following is not bad: Act as

you would if the person for whom you have the highest regard were looking on. It was not the lady herself who helped the world along and raised the standing of women, it was the knight's thoughts of the lady which produced the result. Courtesy, politeness and good manners, even though superficial, have a refining influence.

Chivalry did a great deal for the men. The knights were conspicuous and hence their example was followed in a measure by other men. It took a long time for the spirit of chivalry to reach the lower classes but the social leaders do set the pattern for the rest and to some extent their example is followed. Men formed the habit of being polite, and so far as their own characters were concerned it does not matter to what they were polite.

The good done to women by chivalry is not altogether clear. They were elevated, and they gained a large amount of power. This power was partly the power of weakness. There was no reason why women should cultivate strength either mental or physical, because their weakness gave them their influence. The pedestal was given to woman without price. However the fact of being on a pedestal made a certain requirement of woman. She needed refinement in order to meet the expectations of conspicuousness. It made her self-conscious, but even this had its advantages. It is an open question yet whether woman has gained or lost power by getting off the pedestal as she has done during the past century. However

that may be, it was necessary for woman to get down. The power of weakness ran its course and served a useful purpose in advancing civilization, but it has lost its efficiency and will not fit present-day conditions.

The educational system of chivalry was largely a training in manners. This was what the world needed. Activity analysis as a basis for curriculum building is often spoken of as being very new. The curriculum of chivalry was almost wholly based upon this principle. The regular course of training provided that at the age of seven the boy should become a page. He was taught music, religion, manners, the etiquette of love and honor, and games. During this period he was usually attached to some lady at court. She took special charge of his training. At about the age of fourteen he became also attached to some knight or lord, and learned to serve him. He learned to hunt and to handle a horse and the implements of war. He also learned to sing, dance, and speak in good form according to the social usages of his time. At twenty-one he became a knight, and took the vows of knighthood. He was to be brave, bold, and loyal, and he must be ready to defend the church and to protect women. This was his training and this was his life.

Some of the relics of chivalry which we still have with us are not well suited to the conditions under which we now live but their preservation indicates the hold chivalry had and how well it endures. For

example now when a gentleman tips his hat it is merely a matter of politeness, but when a knight in armor met another, if he wished to show confidence and friendship, he removed his helmet. This meant that he was not afraid the other would strike him a blow on the head. Today when a gentleman tips his hat to a lady he does not mean that he is not afraid she will hit him on the head. In the same way the salute with the right hand is a relic of a time when the raised right hand showed that the person was approaching without weapons in his hand. The manners of chivalry have been continued with gradual changes in meaning.

The ideals of chivalry are in marked contrast with the ideals of monasticism and yet both institutions contributed to the growth of the same church, and to the advancement of the same civilization. The asceticism of the monk, though in itself extreme and undesirable, was necessary in order to combat some of the evil tendencies of human nature. But a world cannot be advanced far on the basis of mortification and self denial. Chivalry emphasized the other side of life. It provided motives to action rather than a system of thought. The knight was proud, mainly of himself, but he tried to be something to be proud of, and this made for improvement.

The institution of chivalry is a thing of the past, the spirit of it—the important part—still lives. With the passing of the institution the spirit has become more refined. There is some evidence that it is fad-

ing, but on the whole probably it is not. So much of life is attitude, and this is the essence of chivalry. Erudition has its value and during the century just passed perhaps it was emphasized to the point of minimizing other important factors in education. It is gratifying to note that some of those other factors are gaining in favor. In spite of all its shortcomings and defects chivalry has contributed to the world an attitude which is too valuable ever to be lost.

CHAPTER X

SCHOLASTICISM

IN point of time scholasticism covers about the same period as the institution of chivalry. The two institutions have very little in common except dates. Scholasticism was at its best during the twelfth and thirteenth centuries. We must now go back into the monastery, take on the garb of the monk and think his thoughts. We must try to think profoundly, seriously, and continuously. We have battles to fight but they are fought with the intellect. We shall be fighting either for the preservation of our sacred doctrines or for our sacred right to think. We are all religious and devout and we all seek the truth. Some of us will find it in the accepted and established doctrines of the church, and some of us hope to find it by advancing in our thought. There are some heretics among us. These must be handled vigorously. But how? To excommunicate a heretic does not end the heresy. Neither does the execution of the heretic end the heresy. Both of these methods have been tried. People can be commanded to speak certain words, but they cannot be commanded to believe. At least commanding people to believe does

not make them believe. The only way to meet heresy is by convincing argument. Let us then prepare for a debate which is to last for about six hundred years. The mental movement of debate is not the open minded sort of research attitude which seeks truth wherever it may be found and accepts whatever it finds. Debates are always based upon a definite proposition which one side seeks to prove by finding evidence in support of its side. The debater is continually in search for evidence, and the value of the evidence is determined by the weight it has in proving the point for which he is contending. There is always a proposition to be proven. This method of thinking is somewhat in vogue yet, and a half century ago the common practice in writing masters' theses in our American colleges was to select a thesis, or proposition, and then try to prove it. When the candidate came to take his examination it was often called defending his thesis. Such was the procedure of the scholastic thinker.

The purpose of scholasticism was to find proof for the doctrines which the church leaders had already formulated, and for the statements in the Bible which they accepted on faith because they believed it was inspired. Where shall we look for such proof? Obviously to philosophy for material and to logic for form. Reasoning was not to be substituted for faith. It was to support faith, and when faith was supported by reason it was made stronger. Two principles were commonly stated: *Credo ut intellegam*—

I believe in order that I may understand. That is, belief will help the understanding, as expressed in an old familiar song:

At the cross, at the cross where I first saw the light

* * *

It was there by faith I received my sight.

And *intellego ut credam*—I understand in order that I may believe. That is, the understanding will aid belief. Faith and reason must go together, but if reason does not fit the faith we must look further for reasons. When an argument is put forward and it is found that it will not stand the test it is not a good argument, but that does not invalidate the proposition.

Scholasticism is concerned first of all with the organization of thought. In other words with logic. The logic of Aristotle was used as a basis, and then the schoolmen worked out every possible form of argument in the most minute fashion. To a person who likes subtlety and is willing to launch his frail vessel out into the deep without fear of the waves or the monsters that may be there scholasticism is most fascinating. It is not an enterprise for the weak or the timid. The problems are profound. To the men who lived in the period under consideration the problems were not only profound, they were most vital. The hope of the world depended upon the solution of them. Never were men more serious. Never did

men put forth more earnest and conscientious effort.

When the writer was a high school boy he was told how absurd and trivial the problems of scholasticism were. For example the question: "How many angels can dance on the point of a needle?" Is that trivial? What is the real problem of which this is but an illustration? If angels are pure spirit, and if spirit does not occupy space then how big must heaven be in order to hold all of the saints? If no space is required to hold all of the spirits then where is heaven? Can there be any place without any space? If not, is heaven nowhere? Can it exist and be nowhere? When we go to heaven shall we go nowhere? Let the person who thinks these questions are trivial give answer. Another question given as trifling was: "If a mouse gets into church and eats some of the holy bread will he be saved?" What is the real problem here? If the efficacy of the sacramental bread is wholly in the bread then would it not follow that any being with this bread in him would necessarily receive all of its efficacy? If the efficacy of the sacrament is in the attitude of the one who partakes then is it necessary for him to have the bread at all if he can have the attitude without it? Let him who thinks these questions are trivial give answer. Whatever may be our opinions about the doctrines of scholasticism, at least the thinkers were profound.

Scholasticism sought mainly deductions which could be drawn from the general principles which it

accepted as basal. The form of argument, therefore, was the syllogism. This form of reasoning had been developed by the Greek philosophers, but the scholastic thinkers elaborated it to far greater extent than was thought of by the Greeks. It will not be possible in these few pages to do more than give a little impression of the fineness and minuteness of their method.

A syllogism is a form of reasoning in which two propositions are compared and a third proposition is drawn from the comparison. For example :

All college students are intelligent
All athletes are college students
Therefore all athletes are intelligent.

If the premises are correct the conclusion is valid. In order to compare two propositions there must be one term which is common to the two propositions. This term is called the middle term. If the reader has studied logic in a text-book he will remember a number of rules for the use of the syllogism. Since we cannot give all of the rules and explain them here it may be sufficient for those who have not studied logic to know that the middle term is a sort of measuring tape by which the other two terms are compared. For example, if we accept the statements that A is B, and that B is C, then we can conclude that A is C. Here the term B is the middle term by which A and C are compared. Since we know the relation of A to B and of B to C we can infer the rela-

tion of A to C. That is the process we use when we measure a room to get a carpet to fit. We get the relation of the room to the measure and then the relation of the measure to the carpet. From these two facts we can infer correctly the relation of the room to the carpet. If you wish to build up for yourself the basis of a system of logic just figure out what are the requirements of a good measuring tape. It must not stretch, else you cannot measure twice alike. If a word is used for a measure it must not stretch, i. e., it must not be ambiguous. The measure must always be the same. If you say that two things are an arm's length apart that is not a good measure because arms are not all the same length. So with a word as a measure if it is used in one place meaning one thing and in another place meaning another it is not a good measure. From this it will be easy to see what is the matter with the old argument:

Nothing is better than wisdom,
Dry bread is better than nothing,
Therefore dry bread is better than wisdom.

If we were to continue in this way we could build up a little system of our own which would carry us fairly well through simple reasoning processes, but when the reasoning becomes complicated it may be hard for us to apply our principles and it may be still more difficult to make clear to some one else just what our line of thought is. A set of formulæ which

covers all the possible forms of syllogistic reasoning, which is understood and accepted by all the debaters because proven to be valid will greatly facilitate argumentative thinking. Such formulæ were worked out and elaborated with the greatest care by the scholastic thinkers. Perhaps they went to extremes in their minuteness, but even if they did it contributed to accurate thinking and thus aided intellectual progress.

They began with terms, and listed all of the different kinds and their uses. Next they studied the kinds of propositions and their possible relations. We may have a universal affirmative, all A is B; a universal negative, no A is B; a particular affirmative, some A is B; or a particular negative, some A is not B. These four kinds of propositions are all the kinds we can have. The names used above are rather cumbersome if we use them much and it will save time if we use accepted symbols somewhat as we use symbols in algebra. It was therefore agreed that the four vowels should be used as symbols for the above four kinds of propositions—A, E, I, and O. If you study these propositions a few minutes you will note that A and E can both be false, they cannot both be true; that I and O can both be true, they cannot both be false; if A is true E is false, O is false and I is true; if A is false E is doubtful, O is true and I is doubtful; if E is true O is true, I is false, and A is false; if E is false O is doubtful, I is true, and A is doubtful. Here is just a start. You

may work the rest out if you wish. If you study long enough you may notice that you can reason from the truth of a universal to the truth of the corresponding particular but you cannot reason from the falsity of a universal to the falsity of the corresponding particular; that you can reason from the falsity of a particular to the falsity of the universal, but you cannot reason from the truth of a particular to the truth of the corresponding universal. This by no means exhausts the possibilities of determining the necessary relations of propositions, but it may serve as a sample of what has been done. If you are a good scholastic you will have all of them as readily at your command as you now have the multiplication table.

There is also a variety of ways in which you can turn propositions around. If you say no horses are men, you can say no men are horses, but if you say all men are animals you cannot say all animals are men. That is, an E proposition (universal negative) can be turned around and be valid, but an A proposition (universal affirmative) cannot be turned around without some change if we wish it to be valid. If we say all men are animals we can say some animals are men, but we do not then have a universal proposition. All of the ways of turning propositions around were studied and each was given a name. Turning them around was called conversion. The last one given above is an example of conversion by limitation. If you are interested you may enjoy seeing how many changes you can make in the four forms of proposi-

tions, and if you wish the names for them look in some text-book on logic.

In order to construct a complete syllogism we shall require three propositions as mentioned above. The first two are called premises and the third the conclusion. The two premises are called the major premise and the minor premise. Any proposition must have two terms. In the syllogism there are three terms and each is used twice. These terms are called the major term, the middle term and the minor term. The middle term is used once with the major term to form the major premise, and it is used once with the minor term to form the minor premise. The major term and the minor term are used together in the conclusion.

If you will take the four kinds of propositions, using the symbols, A, E, I, O, for convenience and combine them in all the possible ways using three each time you will have the number of possible forms of the syllogism known in logic as moods. You will find 64. For example, AAA (all universal affirmatives), AAE (two universal affirmatives and one universal negative), and so on till you have exhausted all possibilities. Some of these syllogisms will not be valid, and some that are valid will be useless because the same argument can be used in some other form and be more effective. If you are a good scholastic student you will learn all of them and know which are good and which are not and why.

There is another complication which is significant for reasoning. We noticed that the middle term is used once in each premise. It may be the subject or it may be the predicate of the proposition. Try all of the combinations you can and you will find four possible arrangements—called figures of the syllogism. That is, the middle term may be the subject of the major and predicate of the minor premise, it may be predicate in both premises, it may be subject in both premises, or it may be predicate in the major and subject in the minor. You may wish to change a syllogism from one figure to another. If you do you will need some rules to follow in doing so or you may make a mistake. If you are a good scholastic student you will have all the formulæ at your command so that you can make these changes as readily as you could apply the formula for squaring the quantity $X - Y$ when you studied algebra.

The habit of making very careful and minute analysis was conducive to clear thinking and contributed much to intellectual development. Aristotle had classified the causes of things under four types; the formal, efficient, material, and final. By formal is meant the plan or form by which things are made. If the object under consideration were a house the architect is the formal cause. The efficient cause is the force which operates to bring about the result. In case of a house it is the carpenter. The material cause is the substance out of which it is made. In case of a house it is the material out of which it is made

—lumber, bricks, etc. The final cause is the purpose for which it is made. In case of a house it is the owner who has the desire for the house for a certain purpose. It was common to consider problems from these four angles.

A device which stimulated such thinking was the “sic et non” method. That is, the yes and no method. By means of this any sort of question could be raised without being heretical. For example: Should faith be based upon reason or not? Is God a substance or not? At the present time the yes and no method is used mainly to test memory. The scholastic teachers used it to stimulate thinking.

This by no means exhausts the complications of the logical processes used in scholastic reasoning, but it may suffice to illustrate the study. If we had it all “down fine” we should be ready to begin the study of the real scholastic problems. Logic was merely a tool subject. Perhaps we can make some progress even if we do not have all of the tools and even if our tools are not always sharp.

With such an elaborate system of logic at their command we should expect an orderly system very carefully worked out. We find Christian doctrines, supported by Greek philosophy, presented in the form of Aristotelian logic greatly elaborated. The problems discussed were mainly religious in their final significance, but the immediate subject was often metaphysical because it was necessary to get a system of metaphysics as a foundation for their think-

ing. The fundamental doctrines of the church were submitted to the most careful scrutiny. Such questions as predestination, justification, freedom of the will, the nature of God, the divinity and humanity of Christ and other similar questions were discussed.

One example may be sufficient to illustrate the type of problem and the method of handling it. One of the fundamental doctrines of the church was that the sacramental bread when it was blessed became the body of Christ. The question was asked how can this be? It looks and tastes the same, and the most careful analysis will reveal no difference. One answer was that we cannot explain it, we do not see how it could be, but we have faith that it is and the faith is enough. Such an answer was not in keeping with scholastic thinking. The fact we shall accept on faith, but we must find rational grounds for our faith.

To begin with we recognize a difference between substance and attributes. Substance is the reality, the attributes are the appearances. Weight, color, size, etc. are attributes. The weight of a body depends on its position. Near the surface of the earth a body weighs much more than it does a few miles above the surface. At just the right distance it has no weight at all. The color of an object changes with the light, and in a perfectly dark room it has no color at all. Even size is merely relative. If a given object, say a table, were the only thing in the universe it would be neither large nor small. Things are large and

small only in proportion to other things. If there were no other things size would be meaningless. Hence it is evident that the attributes of substance may change without changing the substance itself. If that is true is there any difficulty in thinking that the converse is true? That is, that the substance may change without changing the attributes. We cannot know substance itself. We can know only the attributes of it. We must, however, assume that there is a substance which has or holds the attributes. It is only in the substance, not in the attributes, that the change takes place when the sacramental bread is blessed. If this philosophy is accepted then the unreasonableness of the doctrine of the sacrament is removed.

The above paragraph may show the necessity of a philosophical study of the nature of reality. In their study of reality their greatest help came from Plato and Aristotle. However, these two great philosophers differed fundamentally in their conceptions of reality. Naturally two schools of thought developed, the one following the philosophy of Plato and the other the philosophy of Aristotle. The names applied to the two systems of thought are not very satisfactory because they do not help in the understanding of the point of view. Plato held that the reality is in the idea, or concept. This was called realism. His followers during the scholastic period developed this view. In brief it is this: The particular objects which we know in the world are merely ex-

pressions of a concept, which must have existed before the particular thing came into being. Thus, a particular table is the expression of the idea which previously existed in the mind of the person who made it. Particular tables come and go, but the idea table endures eternally. It being the more permanent—in fact eternal—is real. The particular table being temporary, changeable, destructible, is not real. This conception fitted in very well with the doctrines of the church. The world of matter about us is temporary, imperfect, fleeting, lacking in value, lacking in meaning and unimportant. The real world is the spiritual world. It only is eternal. It only has profound meaning and real value.

The doctrine of those who followed Aristotle was called nominalism. According to this doctrine the real things are the particular objects which appear to sense-perception. The concept is a way of thinking of objects. It is a mere name. This did not fit the accepted church doctrines so well but to many it seemed the more reasonable, and in course of time Aristotle's philosophy gained greater influence over the church. This was due to the fact that Aristotle covered so much more extensive a field in his writings and his theory fitted common sense. His writings were used as text-books for a long time. He was commonly called, "the master of those who know."

Scholasticism produced many profound thinkers who have a permanent place in the history of the world's intellectual development. Perhaps the great-

est of these was Thomas Aquinas. His chief work was called *Summa Theologica*. This was written in the thirteenth century, and ever since it has been the foundation of Christian theology. Any attempt to review its contents would carry us far beyond the purposes of our present task. One thought from another great theologian, Saint Augustine, may be given, partly because of the value of the idea, and partly to have something to remember him by. As a rule of conduct Augustine gave the following: "Love God, and do as you please." It must be noticed that the last part of the statement is conditioned upon the first part. If one loves the good what will he please to do? If we could so develop our tastes and inclinations that we should always like what is good and dislike what is bad life would be one continuous round of joy and there would be no struggle. The writer does not like onions, and hence does not eat them. Therefore, if eating onions were the only sin he would be a saint. There is no temptation. We are tempted only by what we like. God is good and if we really loved God we should like nothing that is bad and we should like everything that is good.

It would be entirely too much to expect scholasticism to offer the last word in intellectual progress. Measured by present-day standards it falls far short of meeting requirements. Considered as a step in advance of the thought life of the immediately preceding centuries it is remarkable. It stimulated people to think, and it gave them more to think about

than they had had before. It gave people an analytical and logical method of thinking which made possible the progress of the succeeding centuries. While it started out to support faith by reason and to prove the doctrines they already had, with no idea of advancing to new truths, it nevertheless opened up new fields of thought and helped to liberate the human intellect. Our gratitude is due the men who made scholasticism.

After scholasticism had fulfilled its mission it began to decline. Its interests were too narrow, its methods were too limited, and it became too formal. The forms of reasoning were studied but the examination of data was scarcely attempted. In other words they were more concerned with the validity of arguments than with the validity of the material used in the arguments. Therefore scholasticism cannot longer be the dominant form of thinking, but many of its contributions are useful yet.

CHAPTER XI

THE BEGINNINGS OF UNIVERSITIES

WOULD N'T you like to be a student in a middle age university, especially a university like that at Bologna, where the students virtually ran the institution? They determined what courses should be given, and when the classes should meet. In other words, they made the course of study and the hour plan and also largely determined the fees, and regulated their own conduct. This plan was not followed in all of the universities, but it was largely followed in the universities of southern Europe. At the University of Paris and other universities of northern Europe control was exercised by the faculty.

When scholasticism was at its height during the twelfth and thirteenth centuries there was notable progress in education outside of the monasteries as well as in them. The two factors which make for progress—intellectual stimulation and broadening of interests—were in evidence. Part of the impetus was given by scholasticism, and part was given by outside influences of varied nature. These outside influences consisted mainly of contacts with a larger world than had been known before. Movements of

people spread new ideas. The mingling of Latin, Teutonic, and Saracen elements helped to bring people out of the intellectual ruts in which they had been for so many centuries. The Crusades contributed much to this. While the Crusaders accomplished nothing which they set out to accomplish they did cause people to think new thoughts.

The universities grew up in a perfectly natural way from the schools which already existed. Even the name university was a matter of growth. The earliest name was *studium* meaning a place for study. The word university applied rather to a legal organization or corporation. If the founders of the early universities had foreseen the twentieth century university the term *studium* might have grown into *stadium*. The curricula of the schools were broadened, changed, and organized. The religious interest remained prominent in some of the universities, but in some special curricula were offered. The tendency was for each university to specialize in one or two subjects, e. g. law, medicine, or liberal arts. The word university as now used hardly fits the institutions of that period. By university today we mean a group of colleges organized under one administrative head. The group usually consists of a liberal arts college and a number of professional schools. The middle age universities had not reached such an elaborate organization. It is scarcely correct to say that they were established, they grew naturally and without a preconceived plan. Charters were

granted to schools after they had come into existence, and in some cases long after the school had existed without formal, legal recognition.

The purpose of a charter was not to create a school but to grant certain privileges and protection to the students and faculty. The order of these words, "students and faculty" is due to deliberate intention. To reverse the order and say "faculty and students" would not so well represent the early university. Ever since the twelfth century students have been in one way or another a privileged class. In the first place privileges were granted to them because of the conditions of the times. It was not safe for people to travel except in armed groups. The privilege of traveling to and from school without being attacked was one of the earliest and most common provisions of law relating to students. Courts of justice and the methods of securing so-called justice were very uncertain in those centuries. To protect the student from injustice it was decreed at various times by various rulers that students should be tried by university officials instead of by civil authorities. In actual practice a similar procedure is still in use. It is not uncommon for a police officer or county sheriff to appear before a university committee on discipline while the case of a student who has been accused of a misdemeanor is being considered. In such cases the decision of the university committee is usually final, and the case is not brought into court. While this procedure has been handed down

from the middle ages it rests on somewhat different reasons. It is not that our courts present such travesties as did the courts of the middle ages but it is rather that the student is thought of as an immature child needing parental care, and hence his offences are childish rather than criminal. The term *alma mater* (fostering mother) expresses the idea of this relationship. So far as the disciplinary committee is concerned perhaps the term *almus pater* (fostering father) would be more appropriate.

Some of the statutory provisions for the treatment of students in the University of Paris are interesting. Officers of the law were forbidden to put a student in prison for a crime unless he had committed the crime. If any one struck a student with a weapon, club or stone the witnesses to the act were required to testify. If a student was arrested it was unlawful to mistreat him while waiting for the arrival of the ecclesiastical judge. Extortion under the pretext of taxes was forbidden. Sometimes also students were exempt from legitimate taxes. In all ages people have liked students, and communities like to have them present. Students contribute a desirable atmosphere to a place and they help to advance society, hence society encourages them. In spite of all that was done for them in the middle ages and in spite of the fact that they were better treated than the average of human beings life was not without its difficulties. There is an account of a student at Oxford in the thirteenth century who accidentally killed a

woman. When he saw what he had done he ran away and could not be found. The officers of the law did what they thought was the only thing left to do—took his room mates, who knew nothing about the affair, and hung them. Thus was the penalty paid.

Students have always been comparatively care-free. Their abodes are temporary and their responsibilities light. In the middle ages it was common for students to wander from one university to another and for the most part beg their way. Begging was not looked down upon. The clergy had for centuries begged without apology. Students were classed as next to the clergy. Today a student does not go from house to house asking for something to eat, but he accomplishes the same result in a more refined way. He applies for a scholarship and gets part of his living from that. A scholarship is a matter of honor and the student is proud to get it.

Within the universities the students were not designated by classes as they now are. There were neither freshmen nor seniors. Since they came from so many different countries it was natural for them to group themselves according to the nations from which they came. Hence instead of speaking of the different classes they spoke of the different nations. Each nation formed a unit for the expression of opinion and desires, and it served also as a means of control. Student control might have continued had it not been that standards and credits were desired. The students wanted degrees and they wanted the

degrees to mean something. It was necessary to have a course of study, requirements, and examinations. Sometimes today students complain because members of the faculty give examinations. If we were to follow the early development of university practice it should be the professors who should complain because they have to give examinations. Students forced this disagreeable task upon the professors.

While the range of subjects taught was greater than it had been in the schools of the monasteries it was still very much restricted, and the books used were for the most part ancient. Aristotle's books, written more than a thousand years before universities began, were used more than those of any other writer. In fact Aristotle's books, and commentaries upon his books, were used more than all other books combined. Even in the medical schools many of the books used were very ancient. The idea of investigation and discovery had not yet come into the minds of men. Teaching by authority or by disputation seems to have met their felt needs. The liberal arts courses consisted mainly of logic, philosophy, theology, and a little science. Languages, Latin and Greek, were taught along with the forms of discourse. While the language study was exceedingly formal it was rather practical. Language was taught in connection with the use they made of it. The use was formal, and the language training led directly into the type of disputation then in use.

The characteristic form of thought and organiza-

tion during the middle ages was the hierarchy. The church was so organized. The Pope was at the head and the subordinates of various rank below, each taking his direction from the one next above him, and each responsible to the one above him. Feudalism was organized on the same basis. There were the overlords and the underlords and their respective subordinates. This military form may have been handed down from Rome or it may have developed as a matter of necessity. At any rate it fitted the conditions of the time. The thought life was fitted into the same form. There was a hierarchy of studies. Theology and philosophy were at the top and represented the highest attainment of the human mind. Allegorical forms were very attractive. These do not favor progress but the mind which takes to allegory is an alert mind.

The distinction between degrees was not very accurate. A degree was for the majority of students a license to teach. It meant that they could analyze and define matters of texts and they could carry on disputations in the prescribed form. The requirements for the master's and for the doctor's degrees were not very different.

One of the most striking features of the intellectual and political life of the thirteenth, fourteenth and fifteenth centuries was the great influence of the universities. The University of Paris, which set an example for all of the others, had an influence equal to if not greater than that of the church. It dom-

inated the thinking of the period in France and to a considerable extent in other countries. The University furnished many of the political leaders and it provided a place where freedom of discussion of political and theological questions was permitted. Governments sought the advice and assistance of the University.

Judged by the offerings of modern universities the program of the medieval universities was very narrow, but judged by the intellectual life of the times in which these institutions developed it was very broad. The interests of students extended beyond religion and theology. They studied affairs of this world, political and scientific. These early universities brought about the dominance of the intellectual life. From their time on the world has been controlled by thought. Furthermore they developed an intellectual leadership outside of the church. It would be too much to expect this to be done without a struggle, but even the struggle stimulated thought and made for progress. The struggle is not yet over, and it is still stimulating, and therefore perhaps beneficial.

CHAPTER XII

A LOOK BACKWARD

BEFORE going on to the comparatively complicated tendencies of the Renaissance a glance backward may help us to keep our bearings. The phases of education of greatest interest may be classed under three heads: (a) aim; (b) content; (c) method. A brief summary of the development of these three factors as they have appeared in the preceding chapters will serve as a review and as a statement of the significance of the main movements, practices and theories.

We shall first trace the changing aims of education from primitive times to the beginning of the Renaissance. Among primitive people the aim was (1) to learn practical procedure. That is, how to get a living. This was a forerunner of vocational education. Much of their religion was included in this. They must learn how to please and not displease the spirits so that the spirits would help them. Religion had scarcely anything to do with being good. (2) To satisfy curiosity. They sought for explanations of things. Thus science began, but it had no reference to the control of the forces of nature, nor to methods of doing things more efficiently. It

seems strange to us, but their religion had more to do with practical efficiency than had their science. (3) Group unity. Then, as now, there was no social binding force so powerful as the force of common interests and common ideas. Tribal ceremonies and traditions held people together because it made them feel together. These traditions grew into history, and history today serves the same purpose. All of these aims have persisted and they have increased in importance.

Among the Greeks of the early period the aim was public welfare, including of necessity social harmony. To secure this the individuals must be trained for action and wisdom. This implies strength, skill, and judgment. This point of view is merely a development of the primitive. In the Golden Age of Greece new aims appear and the program is more complex. Efficiency becomes more of an intellectual matter. The ability to direct activities becomes as important as the skill to perform. Wisdom unites with tact and becomes diplomacy. Curiosity increases, and produces philosophy as well as science. It unites with intellectual efficiency and leads to the demand for definitely organized schools. Public welfare needed organized forces, and hence systems of government received greater consideration. The great contribution of the period was culture. It was the idea of culture which made the name golden a fitting adjective. Gold is used for ornament. It does not have very many uses, but it is desired for its own

sake. Culture became so much desired that it soon outweighed other aims.

The aim of the Romans of the early period was to give justice to the individual and power to the state. In all of their thinking the state came first. Expansion into an empire and the construction of a system of law were the results. The literary age of Rome was lacking in aims. At least the aims were short sighted. Culture came in, but it brought with it too little of genuine refinement. True culture does not consist in the possession of a particular body of knowledge. True culture consists of a wholesome, generous, and amiable attitude toward one's fellows. Rome's golden age was too much a gilded age.

With the advent of Christianity came an entirely new order. The Christian's life was devoted to his aims. They were never out of his mind. For himself he sought salvation and his eternal reward in the life to come. For others he desired the same blessings. He did not feel the need of a strong social organization. To him power came from on high, not from any organization which he could effect. Several centuries passed before church organizations began to seek worldly power. To shun the world, escape the devil, and subdue the flesh was his purpose. The result of this was a moral training for all, but little need for schools. Life in the monasteries afforded the best conditions for the supreme effort. With the development of scholasticism there were some changes of emphasis and some new factors. Affairs

of this world came slowly creeping in and broadened the interests, the iniquities of the flesh became of less concern, and the presence of the devil was less keenly felt. However, with these changes came a new and subtle sin—the sin of heresy. To meet this the learned men of the monasteries took for their purpose the demonstration of the dogmas of the church. This required the aid of the wisdom of this world. Hence a broadening of the content.

With the founding of the universities came two very different aims. One was vocation. Schools were established for the training of lawyers and doctors. The other aim was erudition. That is, learning, mainly from books. The application of this learning was a very subordinate matter.

Considering the side of content we find a series of ups and downs. The general tendency was toward broader interests, but the tendency was not steady. Primitive man was interested in people and things. He had stories about people and explanations of things. His interests were not narrow, but he had not differentiated them into what we now call subjects. In some ways this was an advantage. We have carried the matter of differentiation so far that we are beginning to feel the need of correlation and integration. The early Greeks had similar content for their thought but it was presented in better form.

We can afford to skip to the time of the great philosophers, Socrates, Xenophon, Plato, and Aristotle. They were the first to give serious and profound

consideration to the content of studies. Socrates rejected science because he thought men could not discover the laws of nature, and besides, they did not very much concern men. Man's business was to know himself and to lead a good life. Preparation for a vocation in the sense that we use the term entered very little into the mind of Socrates.

Xenophon's chief contribution to education was his outline of a course of instruction for girls. His program was wholly vocational. The girl was to prepare to be a home maker, and hence he planned for her a fairly complete course in home economics. The principle involved was the very practical one which we now call job analysis.

Plato gave a very profound discussion of the values of the various subjects then offered. The most striking part of his curriculum discussion deals with the subject of literature. Plato himself was a man of literary taste, and he wrote in literary style. It has been said that a great poet was spoiled when Socrates made a philosopher of him. As a philosopher Plato loved truth, sincerity, and purity of thought. He felt that literature did not contribute to these qualities because it portrayed so much of badness in the lives of the heroes and in the activities of the gods. If we were to apply Plato's theory today we should look askance at much of the literature, and at much of it we should look with disgust. Literature should make life richer, and sweeter, and purer, and nobler; and it would do this if the selections were made with ref-

erence to that end. But alas! we think that we must pay our respects to all periods and to all types of literature. The old we esteem, and the very old we revere, regardless of its character. The vulgar and sordid when served in style is fed to our young people and labeled culture and refinement. Many of Plato's ideas which were far too advanced for his time have been accepted since. Is it too much to hope that some day our teachers of literature will be inspired by Plato to give up their devotion to historical types and will select their assignments not on the basis of chronology but on the basis of the effect it will have upon the life and thoughts of the reader? Wouldn't it be possible to make a course in literature out of that which is refining, ennobling, elevating and inspiring? Would it be unacademic to permit a student to graduate in college without knowing any of the sordid stuff that has found its way into print? Would the academic robes be unbecoming to one who in his leisure hours had read only that which is pure and sweet and beautiful? The writer hopes that in some future generation Plato's views on literature will receive the consideration which is their due.

Plato's entire curriculum was vocational. Even philosophy was to serve as a guide to the rulers. The life of reason was his highest ideal, but the objective of reason was public welfare.

Aristotle added to the curriculum almost the entire range of science. He was a philosopher, but he was also a man of affairs. His ethics was not a mere

abstract theory, it was a guide to conduct. His broad scholarship and practical knowledge made a good foundation for the universities of antiquity. One would expect the University of Athens and others of its type to grow rapidly into the sort of universities we know today. But other factors influenced the course of events and the universities did not develop naturally from within as we should expect. We shall therefore bid goodbye to Greece so far as place is concerned, but we shall meet Greek learning again and again in other parts of the world.

While all of this was going on in Greece, Rome was growing up in a different way with different interests. Rome very early contributed to the world a system of government and a code of laws. Outside of the field of jurisprudence Rome did not contribute much to the content of knowledge. Rome made a great deal of history, but not the history of thought. Rome did develop a language which was the language of learning for many centuries. Because the language of the Romans was the language of learning they have been given credit for contributing more to thought than they actually did.

The early Christian contribution to content was largely negative. Christianity substituted attitude for erudition. Theology as a serious, vital subject was the main contribution. The Christian church has produced very little learning. Its intellectual growth has been a matter of accepting more and more of what was produced outside the church. Up to the

time of the Renaissance there was a gradual absorption of Greek and Roman learning. Scholasticism contributed methods of thinking and elaborated theology but new ideas were few. Even the universities before the Renaissance did not contribute much to learning. They advanced the intellectual life of the world by creating organizations for the spread of learning which already existed.

The evolution of methods of learning is interesting and suggestive. Among primitive people there were three methods: association, participation, and ceremonies. The younger members were continually in company with the elders. By listening to their conversation they learned whatever knowledge was possessed. It is a great disadvantage to the youth of today to be so little in company with the older people. Whatever children learn in this way is learned without effort and is easily remembered. It is likewise unfortunate that learning by participation in the activities of the elders is so little possible today. The lack of these two natural methods increases the need for schooling. Ceremonies were used to communicate that body of knowledge thought necessary but which was not learned in the natural activities of life. Included in this is the taking of vows. It was out of the ceremonies that schools developed.

The early Greeks added a method which proved to have wonderful possibilities. That is, the public recitation of stories and poems. This practice in course of a long time grew into the lecture method

as we know it. The later Greeks added two other methods of instruction, discussions conducted with the conscious purpose to educate, and the writing of compositions. Dialectic and rhetoric did much to accelerate progress. These three methods, lecture, discussion, and composition, added to reading, served the main purposes of education until the time came for laboratories and experiment. The early Christians used some methods which were not so much to instruct as to mold character. Among these were labor, discipline, and self-punishment. A little later the catechetical method was devised. This was rather a form of testing than of instructing. The scholastic *sic et non* (yes and no) method was very valuable in its time because it made it possible to bring forward ideas which they would not have dared to mention in any other way. The middle age universities adopted all of these methods and added travel.

With this brief outline of educational progress in mind we are ready to look forward to a great intellectual awakening, and to a far more complicated development. We pass to a study of the Renaissance.

PART II

FROM THE RENAISSANCE TO THE
TWENTIETH CENTURY

CHAPTER XIII

THE REVIVAL OF LEARNING

AFTER many centuries of following in one track, the track became so deep that it was necessary to get out. There were many inducements to get out other than the mere monotony of the rut. The thinkers whom we have been following had their minds so fixed upon the kingdom above that they failed to notice things of this world. But this world was advancing intellectually even though the advancement was slow. The non-Christian peoples were interested in this world and they were finding out some things about it. The Christian world awoke in the fourteenth century and got up in the fifteenth. The scholars of the middle ages had worked in their rooms with the blinds pulled down. When the blinds were raised a new order of thinking resulted. Two characteristics of the Renaissance must be kept in mind: variety of interests and the desire for light. The sources of intellectual light are three: (a) reflection, (b) nature, (c) books. Of these, reflection had been used with limited results because it had not been supplemented with other sources. Books had been used but only a limited number of books on a very few subjects. Nature had

been used very little as a source of knowledge. It must be remembered that intellectual progress is by steps and not by jumps. To jump from middle-age argumentation directly to the study of nature would have been impossible. The natural place to look for enlightenment was in books. Hence the search was for books. Outside of the field of religion the best books to be had were those written by the Greeks and Romans. The Latin language had long been the language of learning, and the Greek language was somewhat known among scholars. The awakening was stimulated by many influences. The mingling of people through migration, through the Crusades, and through individual travel developed new thoughts. Into this situation came a few outstanding men. Best known among these are Petrarch and Boccaccio. For centuries human nature had been suppressed. Now it was encouraged to find itself, and it was aided in the effort. To make this life worth while was the purpose. It is much easier to revive than to discover, hence the earlier movement was toward classical literature. By the fifteenth century the spirit of discovery had developed. The great discovery of the century was the discovery of America. The stimulation of this discovery was enormous. It proved that learning is not necessarily confined to that which has been thought. It had been considered a sin to believe that the world was round, but when people actually went around it, it was necessary to change the be-

liefs. What was discovered in America mattered very little for two or three centuries, but the fact that something had been done which they had felt sure could not be done, and something had been found which they had felt sure could not exist forced an open mind. Only a slightly open mind, however, for the human mind when once closed is very hard to open. This and other discoveries made possible a new era, even though it was slow in developing. The greatest pain humanity suffers is the pain of a new idea. For a long time men were punished for making scientific discoveries.

The revival of ancient learning was not painful. On the contrary it was very pleasant. A few selected writings of the ancients had been used. Aristotle and Plato had profoundly influenced Christian theology. To bring in a few other classical writings caused no alarm. The chief point to note is that they brought in some which were entertaining. Reading for pleasure was a new idea. A small American boy who had seen a circus for the first time said to his grandmother, "Grandma, if you ever go to a circus once you will never want to go to prayer meeting again." That represents the spirit of those who discovered classical literature during the revival of learning. After they had learned to read entertaining stories it was hard to get them to go back to the theology of Duns Scotus. The world continued to read Greek and Roman literature until it found something more

entertaining. The fundamental desires of the Renaissance period are still with us but we do not look in the same place to satisfy them.

The literary phase of the Renaissance began in Italy. No doubt Dante contributed much to this, but he was not consciously working toward that end. Petrarch deliberately set about to change the type of thinking in Italy, and in as much more of the world as he could reach. He wrote poetry and prose. His best known works are his *Sonnets* and his *Lives of Famous Men*. He wished the people of his time to become acquainted with the greatest men of ancient Greece and Rome. His purpose was individual culture. Social reforms and religious doctrines receive little attention in his writings.

It will be remembered that when Rome conquered Greece, scholars from that country took their language and learning to Rome and greatly modified Roman life and education. After the fall of Constantinople Greek scholars again scattered over western Europe, especially Italy, and took their language and literature. Again there was a great change in the intellectual life. For more than a thousand years learning had been narrow and formal, and primarily religious. Getting away from the formal was a slow process, but an effort was made to get out of the narrow channel. "Breadth of learning and grace of style" became the objective. Personal culture became a rival of religion, and religion made little objection. For a time intellectual freedom was praised and

prized. Men were free to seek learning wherever they wished. However, intellectual freedom is the hardest kind of freedom to attain. One cannot escape intellectual bondage by being free to think as he pleases. He can think only what he has the background to think. Freedom was encouraged but bondage was inevitable. The bondage was not externally imposed but it was inherently controlling. The intellectual life of the Renaissance was as new as it is possible to be with human nature as it is. There was a new objective and there was a quantity of new material. The new material was refreshing and the interests were more human and more varied, but the bondage to the formal is the most enduring of all bondages. Each generation struggles against it and then succumbs and supports it in some new phase.

The idea of human interests dominated the Renaissance movement. The term humanities in its original meaning was very appropriate. It meant those subjects which were peculiarly human. If a term were coined today to mean knowledge appropriate to human beings it would include a great many things not thought of in the fifteenth century. At that time reading fine literature was the eminently fitting thing for humans to do. In order to read Greek and Roman literature it was necessary to learn those languages. Since Latin had been used more widely and was better known it was more used. When pupils went to school the first thing to learn was the Latin language. This was a very formal process. It took a

long time. The final goal was the mastery of a perfect Latin style of writing and speaking. The best Latin prose writer was Cicero. Hence the highest attainment was to write in the style of Cicero. This type of education became known as Ciceronianism. The thoughts of Cicero were worthy of study, but the greater part of the time of the pupil was put in on his form of writing. Words, phrases, constructions, sentences, and all of the superficial characteristics of Cicero's writings were studied most minutely. After this the pupil was expected to do his best to imitate the style of the great master. The idea of mental discipline, though not yet formulated in psychological terms, formed the basis of teaching method.

There were humanists who advocated a broader education than this. They used Greek and Roman literature because it provided the best means of an education. They sought to make cultured individuals and useful and efficient citizens. They attempted to revive not only the style of the classical writers but to inculcate much of the history and civilization of the ancients. In their program the content was richer and the idea of discipline less rigid. Vittorino, who conducted a school at Mantua in the early part of the fifteenth century, was one of the first to establish a school for this type of learning. The best known educator of this group is Erasmus. He wrote many books, and through these publications spread classical learning, and knowledge of the Bible. His aim

was to reach as many people as possible with this learning in the original Latin. No doubt he shared the hope common in his day that Latin should become the universal language of educated people.

The most attractive personality of the period is Roger Ascham. If the pupils of England and America knew what he wrote they would wish to build a monument to his memory. In his time the most commonly used method of teaching was the vigorous use of the rod. Ascham protested against brutal punishments, advocated making schools pleasant places, and devised a more interesting method of teaching languages than had been in use before. His chief work, *The Schoolmaster*, was written in English. School books were usually written in Latin. He wrote in such an attractive style that his books are read as literature.

Many schools were established for the purpose of giving humanistic education. It is difficult to conceive of the amount of time which could be put in studying language. A typical curriculum provides classes in declensions, conjugations, vocabulary, translations, exercises, and every kind of form study that could be conceived. The main objective of study was piety, but just how this formal study contributed to that desirable virtue is not very clear. When pupils had mastered the Latin language sufficiently to understand literature a certain amount of that was taught also. Exercises in writing to develop eloquence and elegance were included. Schools offering this type of

education continued to be popular almost to the present day.

There is one tendency of human thinking, common to every period, but especially conspicuous during the Renaissance. That is the tendency to slip into formalism. Form is definite, easy to recognize, easy to express, and easy to evaluate. It is the bane of the teacher's job. The essence of subject matter is hard to judge, it is hard to measure, or in the language of the school it is hard to grade. Form can be measured. Therefore we stick to form.

There is a new formalism very conspicuous in education at the present time. The movement is parallel to the Renaissance movement mentioned in this chapter. We are very enthusiastic over objective measurements. It is not *what* they measure but *that* they measure that counts. Whatever we can make concrete and objective we can measure. If we can only get some objective factors in education then we can measure them and know just what we are doing, and we can prove what we are doing. Very true, but in doing this we are dropping into a formalism more rigid than that of the humanists of the sixteenth century. If a present-day objectivist should wake up a hundred years hence and find some historian comparing him with the Ciceronians of the seventeenth century and the scholastics of the fourteenth it might give him a shock, but if he expects to come to life again it would be well for him to prepare for such an event.

CHAPTER XIV

THE REFORMATION

THE Reformation was a part of the general intellectual awakening throughout Europe during the fifteenth and sixteenth centuries, but the point of view was in most respects very different from that of the Renaissance in Italy. The literary Renaissance was a *re-vival* of the acquisitions of an earlier period. The Reformation was not a return to an earlier type of thinking or of educational content. It was a struggle for a new order of intellectual and religious life. It looked forward and not backward. There was little in common in the two movements at first except that both were the result of intellectual stimulation and the new emphasis upon intellectual freedom. Shortly after the Reformation movement entered the educational field it took over a great part of humanistic education, and from then on the two movements merged, but by that time the Reformation itself was passed and we are dealing with the after effects.

We shall be concerned only with the educational influence of the Reformation, but it will be necessary to note the chief religious difficulties because out of them grew educational tendencies of far reaching importance. In any reformation there are two factors

of very different nature. (1) The objectionable conditions against which the movement struggles. (2) The contribution of positive ideals which constitute the goal. In the case of the sixteenth-century Reformation the objectionable conditions against which the struggle was directed were the abuses which had crept into the church. If these abuses had been wholly bad like the worst sins of the Romans the struggle might have been vigorous but it would not have been bitter. These abuses were not wholly bad, nor were they actuated by bad motives. The abuse about which we have heard most was the sale of indulgences. No doubt the extent of this practice has been exaggerated, but the amount is of little concern to us. On the whole the practice was bad, for reasons which are too obvious to need repetition. It was, however, not wholly illogical. If one commits a sin he should atone for it so far as it is within his power. That proposition will be accepted. In general the atonement is expected to follow the sin. But, who is there among us who has such confidence in his own strength of character that he does not think that he will sin tomorrow or at some later day. If he knows his weakness and knows that he is likely to sin, wherein is it illogical to pay in advance? If that argument is not sufficient then we have the great example:

Upon the cross he purchased me
And paid the debt and made me free.

The price was paid by vicarious sacrifice many centuries before our sins were committed. Christ died cen-

turies ago in order that we might be forgiven for the sins which we commit now. Furthermore, the money which came in from the sale of indulgences went to a good cause—the building up of the church. Those who were responsible were for the most part actuated by good motives. In the drama of the stage the tragedies represent a struggle between good and bad. The most heroic tragedies of real life consist of struggles between two goods, neither of which is entirely free from an alloy of bad. Of such a nature was the Reformation struggle.

The great issue, however, was not the matter of abuses. These could have been corrected without a break in the church organization. The movement for intellectual freedom gradually crept into the church. The real issue was over the right of the individual to interpret the Scriptures for himself. May the individual depend upon his own reason, or must he accept the authority of the leaders of the church and believe what he is told? Whatever may be the merits of this question it stimulated education more than any other factor that has ever influenced the world's progress. There are two sides to it, and hence the long struggle, which is not entirely over yet. People like to decide matters for themselves, and they doubt the ability of any one person to decide everything of importance. The spirit of liberty and democracy encourages individualism. God would not have given human beings the capacity to reason if He had not expected them to use it. Hence reason should be our guide. On the

other hand we employ experts in other fields than religion. When we are sick we depend on the doctor's knowledge and not on our own reason. In legal matters we depend on the lawyer, not on ourselves. In every field of practical concern if the matter is complicated we employ an expert. Then why not depend on the expert in matters of religion? These are most vital and most subtle. Yet in this field each sets up his own judgment and says that is final.

The merits of these arguments do not concern us here. The point is that there was an intellectual struggle, and that there were two sides with some merit on each side. As is well known the church finally divided over the issues. Those who had argued for the validity of individual reason, and the right of the individual to interpret the Scriptures for himself, and to make his own decisions seem to have won a victory. It was partially won.

The next step is the interesting and the significant one. They soon found out that giving a person the responsibility of deciding questions for himself does not give him the judgment to decide. Interpretation implies understanding. How can people understand the Scriptures? Only through education. Hence an energetic movement for universal education became recognized as necessary. Here was a new motive for education, and a new meaning to the word "universal" as applied to education. Frequently the phrase "education for all" had meant for all men. Women were not considered. With the new purpose of educa-

tion it was as necessary for women as for men. Woman has the same responsibility for her soul's salvation as has man. Therefore she must have the same training. Only thus can the world be saved. If each one is to save himself by his own reason he must be taught to reason. The duty of the church then is very clearly to build and maintain schools for all. For a short time it seemed that the questions were settled and the way was clear. But soon a new difficulty was discovered, and we pass to the third step in the Reformation movement. Reason cannot be trained by turning it loose and letting it roam where it will. It has to be guided. How shall it be guided and who shall guide it? There is the rub. Another momentous issue arose, and it has not been settled yet. He who molds the minds of men has more power over them than has the sovereign who may control their actions.

Schools were established, and doctrines were taught. So far as external force was concerned each was supposed to be free to follow his reason wherever it led, and to follow the dictates of his own conscience. But where reason leads is determined by the data given to it and the guidance it received in handling the data. In reality individuals were not much freer than they were before. About the only freedom they had was the freedom to choose whom they should follow. The great mass of them were still followers and they did not decide questions for themselves. There grew up a keen competition in the field of education. Each church saw that the only way to maintain itself

was to educate people in its doctrines. In a remarkably short time denominational schools were established all over the settled parts of Europe and America. The benefits of this competition are beyond measure. Education was, however, not confined to church schools. Religious leaders advocated public education and did much to encourage state and local public support for schools. They also advocated an education for broader purposes than the religious, but the elimination of religious doctrines from the public schools did not come till very much later.

With the broadening of the subject matter comes the question of what to include, and our old friend tradition comes to the rescue and provides the greater part of the curriculum. Greek, Latin grammar and rhetoric, and other formal studies received almost as much attention as they had received in the humanistic program of an earlier period.

Martin Luther, the most conspicuous character of the Reformation, advocated a curriculum broader than the humanistic. He urged the support of public schools, and even believed in compulsory school attendance. He believed in education for vocation, and suggested the part time school in order to permit pupils to earn their living while attending school. His very forceful writings and addresses did much to create and develop an interest in public education. Emphasis was given to the humanistic studies, but other subjects were taught.

As a practical educator and organizer Philip Me-

lanchthon did more than Luther. He went about organizing schools and giving advice about the conduct of schools already organized. Had he been commissioner of education for Germany his influence could not have been greater. School officials sought his advice and were ready to take it. His program was almost entirely humanistic. Latin was the most important subject taught.

The establishment of public schools would seem to remove them from denominational influence, but such was not the result during the sixteenth century. The question of Protestant or Catholic control was vital. Political power and religious influence either worked together or worked against one another. The result was a large amount of struggle, but for the most part the Protestant influence was greater in the public schools, and also in the universities. One fact is to be learned from the struggle for control of the schools. Whoever pays the bills may have his way. If the church supports the schools it may determine their character. If kings and princes support the schools they may determine the character. If the people wish to control the schools they will have to pay for them. In the sixteenth century schools changed their allegiance to fit the source of their support. A similar tendency was shown in the United States in the early part of this century when many denominational colleges became non-denominational in order to receive the financial benefits offered to non-denominational colleges by Mr. Andrew Carnegie.

CHAPTER XV

THE JESUITS AND THE PORT ROYALISTS

THE influence of the Protestant schools soon became conspicuous. Education proved to be the most effective means of building up the church and of converting people to Christianity, and keeping them converted. The leaders of the Catholic church saw the value of schools, and established them in many countries. The Jesuit order, known officially as the Society of Jesus, was founded in 1540. It grew very rapidly both in number of members and in influence. They built colleges and secondary schools throughout Europe and America wherever conditions warranted, and they sent missionaries to the frontiers of civilization, and conducted schools where public schools were not yet possible. In America they traveled in the van of the white man's civilization, and they taught the Indians and the children of the pioneers as that civilization gradually moved westward. As a rule tuition was free. Thus many thousands of people are indebted to the Jesuits for schooling which they could not have received from any other source. The members of the order served almost without pay, and gave their lives to the spread of education and the upbuilding of the church of their

choice. The debt the world owes to them cannot be paid. The best we can do is to give them credit for the good they have done, and for the most part ignore and forget their faults.

For purposes of administration the military form of organization was used. A single man was at the head of the world organization. Under him were subordinates and under these their respective subordinates down to the individual teacher. Each was responsible to the one directly above him and all to the head. Uniformity of aims, content, and methods was thus secured no matter how far apart the schools were located.

The humanistic studies formed the main subject matter of their curriculum. Much of the time was given to the study of Latin. In this they followed the general demand of the times. They can hardly be called educational theorists. They offered what people wanted without any very serious consideration of its value. Religion also was taught in the lower schools and theology in the colleges. A carefully worked out system of studies, published under the name, *Ratio Studiorum*, was used everywhere as the guide in method and in content. This was a practical plan of procedure rather than a discussion of educational principles. The Jesuits were routine teachers, following the plans handed out to them. They were not encouraged to do original thinking. The Jesuits' methods were well adapted to this system.

The essence of their method might be summed up

in one word—thoroughness. The assignments were very short, and every statement was analyzed down to the separate words, and everything was explained with the greatest care and minuteness. Then the essential parts were memorized. Great emphasis was placed upon reviews. Each day the lesson of the day before was reviewed. Each week the work of the week was reviewed. Each month ended with a review, and at the end of the year the whole year's work was reviewed. It will be obvious from this that the quantity of matter taught was not large, but what was taught was remembered. Another important part of their method was the participation of pupils. The boys who learned the lesson first heard the other boys recite. This was an excellent way to fix the matter in the mind of the boy who had learned it, and it gave individual attention to the boy who needed help and stimulation in learning his lesson. Boys of about the same attainments were paired off as rivals and each stimulated the other in somewhat the manner of a race. Even in matters of discipline the principle of rivalry was used. If a boy was required to stand on the floor as a punishment he was expected to watch the others and when he caught another boy doing something wrong he could take his seat and the new boy would stand up. Rivalry and emulation were the common incentives. From this it was expected that each would work to his maximum capacity.

The system of training teachers added much to the efficiency of the schools. Every teacher was thor-

oughly trained for his work. The limitations of subject matter and method, together with the absolute uniformity and lack of individual initiative made this easier than it had been under some other systems. Every teacher knew before beginning work exactly what he was to do. Furthermore an attempt was made to select those who were most promising before giving them the training. At least they selected those who were most devoted to the cause.

Between the years 1637 and 1660 a small group of distinguished men sometimes called the Port Royalists on account of the location of their school, and sometimes called Jansenists after one of the organizers, made an altogether distinctive contribution to education. St. Cyran, the head of the group, named them "Little Schools." Little indeed they were so far as a number of pupils was concerned. They considered twenty-five pupils to be about the right number. Why should we be interested in a school about the size of an ordinary one-room country school in America today, a school which existed for only a couple of decades, way back in the middle of the seventeenth century? Because in their "little schools" they had big ideas. The term schools was used in the plural because there were several teachers, each with his small group of pupils—usually six. We should call the organization a small boarding school in which much individual attention was given.

In spirit the school presented an odd combination of intellectual freedom and restraint. The pupils were

free in that they were taught to use their own reason. They were under continual restraint because they were in the care of the teacher day and night. Their theory of education was based upon their conception of child nature, and if we grant their premises, the conclusions are perfectly logical.

The church had taught that the child is born in sin, and to be saved he must be regenerated. This doctrine was accepted by the Port Royalists. The aim was to regenerate the child by a course of training. Mere forgiveness was not sufficient. The child must become different. Nowadays when a child is born with crooked legs he is sent to an orthopedic hospital and his limbs are put into a plaster cast and kept straight until they grow set in the proper shape. What should be done with the child who is born with a crooked soul? Put him into a spiritual cast, and keep him there until he grows set so that he will not slip back. If he has presented to him only the good, if he sees and hears and speaks only the good, and all of his actions are good, then the evil nature with which he was born will be overcome, and he will be a "new man" free from sin. Thus the pure and good and rational life was the goal of education. The program for the attainment of this goal was planned with the greatest care.

In order to make possible close personal relationship between pupil and teacher a small number of pupils was assigned to each teacher. Usually not more than six pupils for one teacher. These pupils stayed

with the teacher day and night. The boys slept in the teacher's bed room, they went walking with him, and played either with him or in his presence. Wherever they were they were under his influence. One of the unsolved problems in America today is how to teach children to use their own language correctly. The difficulty is due to the fact that the teacher gives the pupil a few minutes' practice in correct usage, and then he spends several hours using and hearing the more or less corrupt language of the street. Our teachers truthfully say that if they had the pupils all of the time and could control their talking all day long they could teach them to use correct English. This is just the condition the Port Royalists had. They rarely controlled their pupils by force, but by their personal influence they controlled their language and conduct, directed their interests, supplied the material for thought, protected them from vice in any form, encouraged them by example, and molded their lives by love. How could they go wrong?

Elaborate as the above program may seem it was by no means all that was included in the Port Royalist system. Great attention was given to intellectual development, partly because it was good in itself and partly because it was a stabilizer for moral character. Learning symbols and forms without the meaning was regarded as useless. The child should learn only that which he understands. Otherwise he really learns nothing. Following this principle they began with the native language. When Latin was begun it was taught

in connection with translations into the native tongue. This is common now, but at that time it was a great step in advance. The emphasis upon content had a purpose beyond mere erudition. The purpose was to form the mind as well as to inform it. Education proceeded through the use of the senses and the understanding. Memory exercises for memory's sake were not used. To them intelligence was more important than erudition. In addition to this they sought to establish between the teacher and the pupil a confidence and affection which made the work more pleasant and the school more attractive.

Religious fervor and the conception of innate sin handed down from Adam were overemphasized, but their educational theories were far in advance of their contemporaries. Though their schools were small and existed but for a short time, their writings were profound, and the world has profited by their example and their doctrines.

CHAPTER XVI

REALISM

THE word *real* is a good word, and whoever succeeds in capturing it, and getting it associated with his system has an advantage. The Renaissance movement revived much of classical literature, but concerned itself mainly with literary and language forms. This made the education narrow, but nevertheless it did give the people a chance to get Greek thought. For a time the majority were satisfied with the classical forms, just as some people are now, but some were attracted to the thoughts they got by reading. They said the purpose of study should be to learn reality. Hence the term *realism*.

At first thought this seems as easy as it is obvious. But what is real? The concrete objects which make up the material world? Or is real life made up of human experience? Perhaps the things we do and think and feel are more real to us than the external objects with which we may or may not come in contact. The world which man has made is his world. We live in a social environment, and therefore real life is a social life. We may as well agree in the beginning that we do not know just what we do mean by real, but at any rate we wish to get away from the notion that empty symbols

afford material for intellectual advancement. Henceforth if we read we shall read to find out something about the world we live in. Furthermore we may learn by direct observation of things as they are, or we may learn by contact with human beings. With this general and somewhat vague notion of reality let us place ourselves back in the seventeenth century under the influence of Renaissance tendencies. Education has always meant to us getting something from books. Even though we are interested in reality, we shall still follow our habits and look in books to find what we want, but we must emphasize a distinction which has been neglected so much that it is seldom realized. That is the distinction between words and things. Hobbes has said, "Words are wise men's counters; they do but reckon by them. But they are the money of fools." It is perfectly natural to think that a thing *is* what we name it. An American said to an Englishman, "Why do the English call an elevator a lift?" The Englishman replied, "For the same reason that the Americans call a lift an elevator." Really now, which *is* the thing? Is it really an elevator which the English call a lift, or is it a lift which Americans call an elevator? It is very hard to separate in our thinking the thing and the symbol we use to denote it, but it must be done or our thinking will be confused. Wordsworth has said:

The intellectual power through words and things
Went sounding on, a dim and perilous way.

The way is dim and perilous largely because of such confusions. Our interest is in things, but we communicate with symbols. We must therefore study words and things.

This partially new conception of education brought a broader curriculum. Among those who regarded education as book learning the ideal curriculum was made to include almost everything that had been written in books. To them the aim of education was erudition. The question of values received little consideration, except that they regarded content as more valuable than form. Education was a matter of quantity of information. In general the type of information which had little to do with practical activities was more appropriate for cultured human beings than was the sort of information which could be used in daily work. Taken by itself this type of education was not very valuable, but it made a worth while contribution to education in that it brought into the curriculum a wide range of subjects and labeled them education. Milton outlined a program of study in which he included the writings of nearly all of the best writers of antiquity and later times. Previously so much of this had not *belonged* to education, and therefore to make it fitting and respectable meant a great advance. It paved the way for further advancement. This conception of education has been called *humanistic-realism*.

As the humanistic realist protested against the emptiness of the narrow humanistic learning, so an-

other group of thinkers protested against the uselessness of a quantity of erudition which does not function. This conception has been called *social-realism*. It does not belong exclusively to any one period, but it is especially noticeable in connection with realistic education because of its contrast with humanistic realism. To the social realist the aim of education is to fit an individual for life among other human beings. This requires social adjustment. The mere accumulation of information does not guarantee this. Judgment and disposition are most essential attributes of a human being. If we may turn a quotation from Milton upon himself we might say that the humanistic realist is

Deep versed in books, and shallow in himself.

At the end of a course of study the question should be not how much you have learned but how different you are. If you are no different, then of what avail is it that you know more? Social-realism was not a matter of curriculum. It was a matter of experience and attitude and application of knowledge to human affairs. Travel was highly recommended for young people in order that they might learn about other people and learn how to get along with them. A happy, worthy, serviceable life guided by wisdom in practical affairs is a nobler objective than bookish learning. Boys should learn what they ought to do when men. It is better to repeat a lesson in action than in words.

The pupil is to live what he learns rather than merely to memorize it. Thus the art of living is the goal of learning, and the school is not merely a "place where minds are fed on words" but a place to prepare for real life as it is actually lived.

We have considered briefly reality as presented in books, and reality as experienced in everyday human life, but there remains another conception of reality. The material world was being studied more than ever before, and discoveries were being made. Science began to occupy a more important place in thought. The scientists felt sure that they were studying the *real reality*, because they considered things and forces in nature. These exist independent of human thought. They are real in themselves. We can discover them but we cannot make them. This conception has been called *sense-realism*. This term is convenient for purposes of comparison with the other realistic conceptions, but the term scientific movement would convey more meaning. This movement fostered a new method of study—a method of studying things themselves directly, and not merely reading about them. Francis Bacon developed the method of induction to meet this need. The fundamental principles of induction had been recognized by Aristotle, but deduction was better fitted to the type of thinking favored during the middle ages. In the first place the new method was not intended as a method of teaching. It was a method of investigation for the sake of adding to human knowledge. Making discoveries is far different from spread-

ing knowledge already accumulated. To appreciate Bacon's contribution we must think of ourselves as wishing to advance knowledge, rather than to learn what is already written in books.

In approaching a new problem the first question should be, "What is already known about this subject?" If the problem is very comprehensive it will require a survey of the field and a careful arrangement of the material collected. This will show what is known and what is to be sought. A systematic collection of material was not new, but to advance from the known to the unknown required new procedure. For this the inductive process was used. In induction we observe a number of particular instances of some phenomenon, and then conclude that what is true of those we have observed is true also of others which we have not observed. This gives us a general statement which we accept as an hypothesis. Then we apply the hypothesis to as many cases as possible and if we find no exceptions we conclude that our generalization is correct. Generalization is the goal of induction. The starting point is direct observation through the senses. Advancement comes through carefully made observations, and carefully drawn conclusions. This method of thinking is so common today that it seems a matter of course, but not so in Bacon's time.

The purpose of study was to control nature for the benefit of man. But nature can be controlled only by being obeyed. It is not possible to disobey a law of nature. The man who sat on the limb of a tree, sawed

the limb off, and fell down and broke his neck did not violate a law of nature. The law of nature was carried out completely. Nature never forgives and nature never forgets. Our job then is to learn the laws of nature. The important subject matter of education then is science. A study of science should remove superstitions and false notions accumulated through many generations. It only can give power to mankind.

For the most part Bacon's interest was in the curriculum, but his emphasis upon scientific procedure advanced the idea that the process of education should be scientific. This meant that the nature of the pupils taught was important as well as the subjects taught. Bacon was not a psychologist, and did not contribute to educational psychology but he helped to prepare the way for that field of study. His work also did much to encourage the use of the vernacular. He used the Latin language freely, and gave Latin names to his books, but with the emphasis upon observation and experimentation Latin ceased to be the main subject of study.

CHAPTER XVII

COMENIUS

JOHN AMOS COMENIUS made so many important contributions to education that he deserves an entire chapter. He was born just one hundred years after the discovery of America. He might be classed as a realist, but he was so much more than a realist that it seems that he should be put in a class by himself. We may safely call him the first great, modern educationist.

Comenius was left an orphan when quite young. His education was not planned by his guardians, but his own inborn energy and intellectuality carried him through a good education and through an unusually active life. While a young boy in school he observed many of the defects in the teaching methods of his time, and he was impressed with the lack of educational opportunities for the majority of children. He was early imbued with an ambition to spread learning, and to improve the methods of acquiring it. At the age of twenty-four he published a book on grammar. He entered the ministry, and throughout his life he divided his time and his interests between the church and the school. For him these two institutions had much the same purpose. His life was full of trou-

ble and struggle, due to the conditions of the times in which he lived. He lived through the Thirty Years' War, and figured largely in the intellectual controversy. He lost manuscripts and other property, he was banished, and otherwise persecuted. His religious controversies were not entirely with the Catholics. There was bitter opposition to some of his views among the Protestants. He was never certain of living for a very long period at a time. He became a bishop in the Moravian church, but continued his writings on education. He was called to England to advise and perhaps reorganize the educational system of that country, but political troubles made it impossible to accomplish very much. He was also called to Sweden for consultation with the leaders of that country. It has been stated that he was once invited to come to America as President of Harvard University, but there is some doubt about the correctness of this statement. It would be interesting to speculate upon the influence he would have exerted in this country if he had become President of Harvard. He believed in a broader education than Harvard had at that time, and he believed in the education of girls. What might Harvard have been?

The quantity of work which Comenius did and the buoyant spirit he maintained through one adversity after another, through persecution and suffering, through opposition and poverty, with condemnation and praise, with success and failure, and with nearly all of his work done under trying circum-

stances afford an inspiration of unusual force. It is said that he wrote forty-two books on education, besides many on religious and political subjects. Some of these books were small and no doubt his actual contributions could be printed in much less space. He was a man of large ideas, and even though he were writing a text-book on a particular subject he saw beyond the subject a far reaching aim of education.

We should expect Comenius to formulate the aim of education in religious terms. This was in accordance with his own work and interests, and in accordance with the views of his time. "Eternal happiness with God" was the aim. Man must attain this state by his own efforts as well as by divine forgiveness. The attainment of knowledge was the first step. A full knowledge of the world—God's creation—would lead to virtue and piety. Comenius never attempted to evaluate the various departments of knowledge. He thought that knowledge was a good thing, therefore every one should get all of the knowledge he could. He would have every person possess all knowledge. To that end he set himself the task of collecting all knowledge, organizing it into a system in which each part will be placed with the other parts with which it belongs. He sought an orderly arrangement of universal knowledge instead of a mere collection. He worked many years preparing a cyclopedia of universal knowledge. The arrangement was not to be alphabetical as we have it now, but he meant to have it logical. Related subjects should be treated together.

The name he gave to this set of books was *Pansophia* (from two Greek words *pan* = all, *sophia* = wisdom). No doubt Comenius regarded this as his great work, but the manuscript was burned before it was ready for publication. Comenius grieved much over the loss of all of this manuscript. He did not realize how rapidly knowledge was changing. If the complete set had been published it would have been useful for only a short time.

While Comenius overestimated the value of his *Pansophia*, no doubt he underestimated the influence of some of his other contributions. Many of his contributions seem very commonplace to us. That is because they have been adopted and we take them as a matter of course.

Within the last two decades we have heard a great deal about the six-six plan of organizing the public school—that is, six years in the elementary school and six years in the high school. We accept the graded school as a perfectly natural organization, but graded schools are comparatively new. Comenius suggested a grading system based upon the psychology of development. According to this there should be four periods of six years each. The first six years were to be spent in the School of the Mother's Knee, the next six in the elementary school, the next six in the high school, and the next six in the university. These transition periods correspond very well with human nature. When a child is about six years old he passes out of infancy and is ready to go to school.

At about twelve years of age he goes through another transition period and becomes a big boy. Our junior high school is designed to take the boy at this age. Of course Comenius had not thought of the junior high school as we know it but he expected pupils to enter the secondary school at this time. At about the age of eighteen the big boy becomes a young man. His interests and activities fit him for a different sort of treatment. It is time for him to enter college. Our present grading system, therefore, is essentially the one suggested by Comenius. It took the world more than three hundred years to grow up to Comenius' plan. The four schools thus provided in Comenius' plan were called (1) The Mother School, (2) the Vernacular School, (3) the Latin School, (4) the University.

While the *Pansophia* was never published Comenius, nevertheless, covered a wide field of knowledge in his separate text-books. His books were written with the method of teaching uppermost in his mind. He tried to follow a new and natural method, but his theological and humanistic training made many things seem natural to him which seem artificial or even fantastic to us. Still, he advanced far beyond others of his time. Most of all he wished to get away from empty symbols. The natural way to learn is through the senses. Since it is not always possible to present the object itself to the senses Comenius conceived the idea of substituting pictures. Perhaps this was his greatest contribution. Before

this no one had thought of having pictures in textbooks. The pictures served a double purpose. If the object presented were not already familiar the picture gives a better impression of it than could be given in words. In learning language the picture affords a means of association of the word with the object. He called his book the *Orbis Pictus* (the World in Picture). Compared with anything that had been published previously it must have given the child very vivid images of the world of things which were regarded as of most interest. The pictures were crude, due to the crudity of the printer's art, but they were much better than none, and the idea of using pictures in books was a great innovation.

Another innovation was the method of teaching languages. Still following his principle of keeping away from empty symbols he printed the Latin and vernacular in parallel columns so that the pupil could always associate the foreign word with the word of his own language. Thus he expected to gain time, and also teach ideas as well as words. Without doubt his method was a great improvement over the formal, empty language lessons used before his day, and unfortunately for a long time after his day—sometimes even yet.

Comenius was fond of speaking of education as a gate to some field of knowledge. His treatise on languages was called the *Gate of Tongues Unlocked*. Another work was called the *Gate of Phenomena*. His main treatise on educational theory was called

the *Great Didactic*. It contained the general principles which were elaborated and applied in his other work. It will be worth while to think over some of the principles which he laid down.

Whatever is taught should have a definite use in everyday life.

General principles should be taught first, then the details. All things must be taught in proper succession.

Never leave a subject until it is thoroughly understood.

A perfect knowledge of God, nature, and art should be taught.

Things should be taught with reference to the manner in which they come into existence.

All things stand in definite relations to one another.

For a complete list of chapter headings of the *Great Didactic* see Monroe's *History of Education*.

It is not easy to sum up the work of a man who had produced so much, but among his many ideas may be mentioned the following: A graded system of schools for everybody—both boys and girls—beginning in infancy and continuing through the university. An improved method of teaching languages. An improved method of teaching science. Books illustrated with pictures in such a way that the pictures give information about the objects and also help the pupil to learn the language. An organization and integration of knowledge in a way to make education a builder of character. In addition to this he produced text-books which could be used in the daily work of the school. He was a profound

theorist but also a practical worker. He taught people, and helped people. The welfare of the pupil was always the end and the subject of study the means. Is not this enough to entitle him to be recognized as one of the greatest educators and the first modern educationist?

CHAPTER XVIII

JOHN LOCKE

THE Revival of Learning tried to bring intellectual freedom, but it failed. It did, however, present the idea, and an idea let loose in the world is not easily lost. It was successful in bringing broader human interests. The Reformation made a successful rebellion against authority, provided a new motive for universal education, and established schools. Realism opened up many lines of thought. The intellectual world no longer traveled one road. In what way was the world moving? Some of it was moving in one way and some of it in another. Even if one knew well the intellectual conditions at the middle of the seventeenth century he would hardly dare to predict the next event. Men are not independent of their times. They are largely the product of their times, but with a great variety of possibilities it is not easy to say which factors will most influence the next great man. In the seventeenth century the world was better prepared for ideas than it had ever been before. Into this situation came one of the world's greatest thinkers—John Locke. He was a physician, a psychologist, a philosopher, a statesman, and a tutor for some boys of noble birth.

His medical studies gave him an interest in the physical welfare of children and gave him knowledge of the development of intellectual powers and a basis for theories of the learning process. Philosophy led him into the field of epistemology—that is, a theory of the nature of knowledge. His familiarity with statesmanship gave him a knowledge of the goal of education proper for a youth of noble birth. His experience as a tutor gave him a practical knowledge of teaching procedure. Out of all of this Locke constructed a theory of education.

The first requirement is a sound body. Without this all else is of little avail. Fresh air, proper diet and exercise are the chief means of promoting health. Locke had no extravagant or eccentric theories about health. His rules were rather commonplace and sensible but the emphasis he placed upon them as the basis of a satisfactory life was important because health had been so much overlooked as a part of education. Plain food, loose clothing, exercise in the open air, and regular habits of sleep, would bring good health to nearly every one even if he never heard of vitamins, calories, or other modern discoveries. The problem of promoting health is not so much learning what to do as getting people to do that which is best for their health. Locke did not make a scientific study of health. What he did was to impress upon people the importance of starting children out with strong and healthy bodies, partly because this is desirable in

itself, and partly because it is a means of developing the moral and mental phases of life. "A sound mind in a sound body" was his phrase. He emphasized the essential relationship between these. Previous to Locke people had rarely thought that there was any connection between the development of the body and the improvement of the mind.

The aim of education is the formation of character, but if the word character is used in its broad sense, as it should be, it is not possible to separate it from intellectual development. Neither is it possible to separate it from physical development. This does not mean that the possession of brute strength is a guarantee of good character. It means that the condition of the organism is a factor in character. The structure and function of the nervous system are physical factors, and both influence character in great measure.

Locke has been given credit for formulating the disciplinary conception of education. He did formulate such a conception and elaborated it, but he is not responsible for every doctrine that has been advocated under the name of discipline. The development of physical and mental power and self control come as a result of rigorous exercises of body and mind. This is what Locke meant. He did not mean that a subject has disciplinary value merely because it is hard and dry and formal and distasteful. In fact such a subject is likely to lack just the quality which makes it disciplinary. If a subject does not

get into the pupil's system and become his own it has scarcely any influence in building his character. Hence it would not have disciplinary value.

Locke never allowed an interest in instruction to shut out the view of education. Education is much more than instruction. Instruction is one of the chief means of education. The aim of education, according to Locke, is the building of character. The keynote to the building of character is habit. Habits are both physical and mental. The laws of habit formation are the same for the mental and the physical aspects. Locke's theory of education has been called the "disciplinary conception," but the term habituation conception would have afforded a much better description. His whole scheme of education is a plan to habituate the pupil to effective and desirable ways of thinking and acting.

Locke's educational psychology was based on the theory that the mind of the child at birth is like a blank tablet. He used the Latin phrase *tabula rasa*. Only through experience can impressions be made on this tablet. The senses provide the means of making the impressions. Hence the maxim, "Nothing is in the mind which was not first in the senses." The first step in the child's development is to receive sensations. Every sensation received makes an impression which lasts through life. That is, it changes the character of the individual so that the next sensation is modified by it, and thus nothing is ever lost that has once impressed the senses. In this way

there is gradually built up a set of experiences which give character to the individual. If the experiences are well selected the character will be good. If they are not well selected the character will be bad.

Sense impressions constitute the beginning of knowledge but not the completion of it. They are not knowledge, but they are the material out of which knowledge is made. Emphasis is placed upon the order of intellectual development. Sense impressions come first. In order that they may be retained memory must accompany them, but as a conspicuous factor memory develops a little later. That is, so far as education is concerned the memory subjects come later than the sense training. With the supply of material furnished by the senses duly retained the mind is ready for the higher intellectual processes. The crowning attainment of the human mind is reason. So far as the mental processes are concerned the ability to reason is the goal of education.

He holds that the educative process should increase the powers of the mind rather than to enlarge its possessions. In the discussion of the curriculum Locke has in mind two things: the kind of information which an English gentleman needs, and the kind of exercise it gives to the mind. The way to strengthen any part of the body is to exercise that part, so the way to strengthen any faculty of the mind is to exercise it. In selecting the information to be given Locke was entirely utilitarian. The

value of a subject was to be determined by the use to be made of it. In this respect his method of constructing a curriculum was similar to what we now call job-analysis. The English gentleman did not have a "job," but he had a life to live, and that was what he was to prepare for. In regard to strengthening the mental faculties the case was quite different. Locke never forgot that education is a matter of habit formation. But habits of thinking may mean habits of thinking about certain content, or it may mean habits of thinking in a certain way. It was the latter which was of greater concern to Locke. Psychologists of that day held that the mind was made up of certain faculties—attention, memory, observation, reason, etc. One who had these faculties well trained should be able to use them effectively. To give such training was the purpose of the school.

This conception of education has been the most popular one ever presented. It appealed at once to nearly every class of people interested in education. The teachers liked it because it provided for them a definite program which they could follow, and they felt that they knew always just what they were doing. They could explain and justify everything they did. The classical scholars grasped it with enthusiasm, because they were losing ground somewhat on account of the influence of realism on the schools. This disciplinary conception gave them a new argument for their favorite studies. The church leaders

avored it because the church had been built up on the idea of discipline, and here was an educational theory similar to their religious doctrines. Scientists liked it because it seemed to rest upon scientific grounds. The common people liked it because it was something they could understand, and they felt that they knew what their children were getting. This theory was brought forth by a psychologist, it was advocated by psychologists, and they tried to prove its validity. It suited them so well that they were very reluctant to give it up. They were forced to give it up because the mind is not made up of separate faculties each functioning somewhat independently of the others. There is no objection to calling memory a faculty if that word seems convenient, but it is not a faculty which can be strengthened by exercise regardless of the content. It is possible to strengthen a muscle by lifting a weight and it makes no difference whether we lift ten pounds of wood, lead, or coal, but memorizing a Latin verb will not help a person to remember the stock market quotations. Every one has a good memory for some things, and a poor memory for other things.

Locke was always a constructive thinker. His mind ran to building up, not to tearing down. He was not a critic. In his discussions of habit he was interested in the formation of desirable habits. He wasted very little time talking about the breaking of undesirable habits. If a child is started right and has good habits well established we need not worry

about bad ones. The way to break a bad habit is to form a good one to take its place.

Our intellectual possessions are of less importance than our intellectual attitudes. The love of truth is more important than the possession of a particular bit of knowledge. He regarded his own work as pointing the way to truth rather than presenting anything which could be accepted as final. In his treatise on the *Conduct of the Understanding* he presents what he believes to be the mind's capacity to seek and discover truth. He was too hopeful that his successors would be able to accomplish results which he had not attained. Late in life he wrote, "I see openings to truth and direct paths leading to it, wherein a little application and industry would settle one's mind with satisfaction and leave no darkness or doubt." More than two hundred years have passed since those words were written, and if Locke could have lived through those two centuries he would have found abundant evidence that the race is as much subject to habits as is an individual. Progress has been made, but not so much as Locke expected. We bring out our intellectual heirlooms, dust them off and pronounce them new. Habits of thinking are as hard to break as habits of acting. Locke was no doubt right in conceiving education as a process of habit formation.

CHAPTER XIX

JEAN JACQUES ROUSSEAU

IF it is correct to define a man as a walking contradiction then Rousseau was the greatest man who ever lived. He was brilliant, stimulating, critical, powerful, but emotional, eccentric, inconsistent, extreme, penetrating but never judicious, full of inspiration but lacking the will to act. In spite of his severe criticisms of the world he was never pessimistic. He thought the world was all wrong but he was confident that he knew what the matter was and how to correct it. The buoyant and hopeful spirit shown in his writings gives a verve and zest rarely found. He was a handsome musician, who was also a philosopher and a vagabond. Perhaps this unusual combination of characteristics accounts for the peculiar fascination of his writings. He possessed individuality and originality, and yet he was in greater degree than most writers the product of his times.

The intellectual life of western Europe during the eighteenth century is difficult to describe because it is difficult to understand. Perhaps it is impossible for a person living in the twentieth century to conceive the mental attitudes of the eighteenth century.

This was a century of discontent. The church and the state were blamed for the conditions. These were the two visible institutions which could be held responsible. Either of these could have done much to relieve the situation if the leaders had been far-sighted enough to do it. Why didn't they? Because the thought life of the time was made up of an accumulation of traditions of varied sorts. The Christian church which had started with a sweet, simple life of self-renunciation in this world and a firm faith in perfect joy in the next world had degenerated into asceticism, then risen to a highly elaborate and formal theology. It had started with its faith pinned entirely to the power of God, and without worldly ambition, and had developed into an organization with enormous political, financial and intellectual power. Its spiritual power is very much a matter of doubt. It had become superficial and substituted external forms for subjective religion. It seemed to care more for power than for grace. To keep up the appearance of piety it had declared the simplest pleasures to be sinful, but otherwise had done very little to help the poor, the despised, and the oppressed. The very classes whom Jesus had tried most to help were most neglected. Instead of devotion there was fanaticism, instead of faith there was superstition, instead of morality there was hypocrisy. These criticisms apply to both the Protestant and the Catholic churches.

The attitude of the rulers was similar to that of

the church leaders, but worse. In the minds of the aristocratic rulers the people existed for the state and not the state for the people. Extravagance, display, and splendor afforded a very thin covering for the selfishness, vice, and depravity of those who possessed the wealth and controlled the state. The laws were severe and oppressive. Death seemed to be the convenient penalty for offences both great and small.

The social life fitted the political and religious conditions. It was formal, artificial, extravagant, brilliant, insincere, only superficially refined, selfish, useless, and often degrading.

There were, of course, some people in the world who were leading wholesome, Christian lives. They were inconspicuous, but nothing in this world is ever lost, be it ever so small and be it good or bad. The names of those inconspicuous, good people may not be recorded in history, but their lives were not wasted. They afforded a pleasing contrast to the world about them.

There were also some profound and courageous thinkers who saw through the sham of political, religious and intellectual despotism. They saw the combination which held people in ignorance, superstition and fear, and they entered vigorously into a movement to relieve the world of its mental degeneracy. Chief among these was Voltaire, the brilliant, literary philosopher and intellectual revolutionist, who devoted his life and his talents to the

liberation of the human mind. He was not so much concerned with the miseries of the lower classes as he was with the thought life of the more intellectual. Nevertheless he, more than any one else, was the brains of the French Revolution. He died before the military revolution took place, but the real revolution was at least a century in developing. In philosophy Voltaire was a rationalist. His antagonism to the church was due partly to its emphasis upon faith and dogma and partly to its superficial and ceremonial exercises and its tyranny over the thought and the conduct of the people. This rationalism was the result of an entirely different train of thought than that which led to naturalism, and yet these two movements supplemented each other and worked toward the revolution. Pure reason is good so far as it can go but its limitations were shown by the Greeks and the Romans. It does not meet all of the needs of human society. It can satisfy only a comparatively few people. Every one can feel, but only a few can reason successfully. Reason is stiff and cold and formal, and in spite of its efforts to be broad and unprejudiced it is very apt to miss important data.

At this point the reader is urged to pause for a rather long time and consider what he would do and what he would say if he were living in the middle of the eighteenth century, were young and vigorous, and were inspired with the desire to alleviate the deplorable condition of his fellow men. Unless

you are a very remarkable person you will not think of saying the things which Rousseau said, but after considering the situation carefully you will more fully appreciate the contribution which Rousseau made.

That society is in bad shape is beyond doubt. The reason seems to be artificiality and inequality. A way must be found to overcome these two evils. The social world has been made by man, and he has done a poor job of it. God is perfect. Hence "all things as they come from the hand of God are perfect." It is man who has spoiled them. Our task is to find the way back to nature. When we follow nature we shall be following God. There are two ways to approach the problem: one is to study nature directly, the other is to observe men, see what they do, then do the opposite. Instinct is more constant than reason. Reason is acquired, instincts are implanted in us by nature. Therefore we should follow our instincts. With this point of view Rousseau began to build a social system. In his thinking there is shown a rare combination. He was a severe, destructive critic and at the same time an optimistic, constructive thinker. His first effort was to remove inequality among men. One of his early writings was under the title of *Origin of Inequality Among Men*. A more important, constructive contribution is found in his *Social Contract*. In this he presents his view of the relation of the individual to society. In nature the individual is supreme. Nature left

alone would not provide an organized society. How can we retain the supremacy of the individual and still have a society? "Rights" are fundamentally individual. Society, as such, has no rights except those which have been granted unto it by the individual. The "social contract" is merely the agreement which individuals can enter into for their mutual advantage. If each individual will agree to let the other person and his property alone then each can enjoy himself and his property without fear of interference. It will be more economical to make such an agreement than to depend upon individual force to protect the rights of each. This is very simple and easy so far, but Rousseau found it necessary to go beyond this simple and primitive principle. He added other rights. For our purpose the most important of these is the assertion that education is the birthright of every man. It had been common to regard education as a privilege offered to those who could spare the time and expense to get it. Now, Rousseau's claim that it is a right is generally accepted. We go still further and insist that it is the duty of the individual to get an education, and the duty of society to provide it for him. Rousseau added that liberty, happiness, and personal welfare were also rights. The Declaration of Independence drawn up by the American colonists is an embodiment of the principles enunciated by Rousseau. Even the phraseology is copied after him. So much of Rousseau's theory of state has been

incorporated into our American democracy that it requires no discussion. Government only with the consent of the governed is the substance of it. In reading anything that Rousseau writes it is necessary to select only the more reasonable and constructive part and pass by with interest but not with serious concern the extravagant claims and criticisms. This applies to his educational writings as well as to his political writings.

Rousseau's great work was *Émile*. To adopt the entire program outlined in this work would be altogether absurd. It could not be done, and if it could society would be wrecked. To read the book for valuable suggestions and for thought stimulation is very profitable. By toning down somewhat his extravagant statements, and by modifying the details of his suggestions we can get the basis of much of the best educational work that is being done today.

One of his first educational principles is that the child should form no habits except the habit of not forming habits. This is of course impossible, but what he means to emphasize is that habits are modifications of nature, and if we wish to preserve nature in its purity we must not modify it. Even this is an extreme statement and cannot be applied literally. However, there is a suggestion in it that is worthy of consideration. The child should remain plastic, and not be allowed to be made over by con-

ventions to such an extent that he becomes unnatural and artificial.

As indicated above we shall not look for a system of education which can be followed. *Émile* is a story about a boy who is brought up under what Rousseau regards as natural conditions. The conditions conceived are natural in some respects, but no boy could live in the world as it actually is and be under those conditions. They simply do not exist. If we assume the conditions, then the development of *Émile* might be approximately as pictured. We can get more out of the book if we do not worry about the great number of perfectly valid criticisms which could be made.

It took the world a long time to get over the doctrine of inherited depravity. For centuries it had been held that every child is born a sinner. The church had taught that the natural man is bad, and the purpose of education is to overcome nature. Rousseau met this doctrine by very emphatically saying the opposite. He said that nature is good, and it is the only thing that is good. We live and die in slavery to social customs. Statutory laws are not the laws of nature. Give the child entire freedom and he will learn the laws of nature. When he follows these his life will be harmonious and happy. There is no idea of obedience in following the laws of nature. Nature never commands, and yet if we try to run contrary to nature we never can get de-

sirable results. Authority and obedience are terms which apply only when the rule is arbitrary.

Rousseau goes a little beyond his own individualism, and a little beyond his belief in nature pure and unmodified when he asserts with so much vigor that education is a right of every person. This view places upon society the obligation to provide something for the individual which he does not directly pay for. Nevertheless to preach this idea so effectively was a great service to the world. One purpose of it is to level distinctions. What makes people undemocratic is the feeling of difference. Give all the same chance and the difference largely disappears. This is a very familiar American doctrine, but it was very much out of harmony with the conditions under which Rousseau lived.

Beyond physical freedom and nourishment the next fundamental principle is what has been called "negative education." Rousseau says, "What now is necessary to be done to educate the natural man? Much, no doubt, chiefly in order to hinder anything from being done." Never teach a child anything until you are obliged to, does not sound like education. There is, however, a very important pedagogical principle involved. If we approach the subject from a somewhat different angle than did Rousseau it may seem less extreme. Why is it hard for pupils to learn? Why is it hard to teach? Mainly because so much of the time we are trying to teach the pupil something which at the time he does not need to

know and which therefore he does not want to know. For this reason he does not like to study, and the work is drudgery. We try to stimulate him by offering him something he does not want as a reward for the distasteful labor. Can we find any better procedure than offering him something he does not want for doing something he does not like? Rousseau has a suggestion. It is not difficult for a pupil to learn what he feels the need of knowing. It will save time then if we wait till he needs to know something before we try to teach it to him. The question will readily be asked, "what if he does not feel the need of knowing anything?" Here is an opportunity for the real teacher. Instead of compelling the pupil arbitrarily to learn something the great teacher will create a situation in which the pupil will feel the need of a certain bit of knowledge. Then to teach it to him will require little effort on the part of teacher or pupil.

It is obvious that this principle cannot be applied to everything which a child should learn. Unless he learns some things before he needs to know them he will not be prepared when he does need the knowledge. Often it is too late to learn a particular fact when the time comes that it is needed. However, within the limits of practicability the principle is excellent.

Likewise teaching subjects before they can be understood is contrary to nature. The natural development of the child should determine the time for

giving information. It had been the practice for centuries to give the child what it was thought he would need when he became an adult. It had not been realized that childhood had any value in itself. It was merely a period of preparation for real life which came only with maturity. Rousseau forcefully combated that idea. He held that childhood is as much a part of life as is manhood. Childhood has its values, but they are different from adult values. In so far as education belongs to childhood it should be fitted to childhood. Education comes from the development of inner tendencies. The function of education is not to remake the child, it is to develop him. To do this he should never be required to do anything against his will. With reference to the educational practices of the time Rousseau says, "From the moment of their birth you cross their desires, the first gifts they receive from you are chains, the first attentions they experience are torments." To be sure, children are not actually treated quite so badly as that. Still the statement offers food for thought. What makes little children bad? Their natures or their environment? A child in the parlor is likely to scratch the furniture, soil the carpet, and get his sticky fingers on the piano. All of that is bad, but is the child bad? Is the parlor furnished to fit the needs of the child? If, instead of the furnishings mentioned above, he had benches and grass and boxes would the same acts be bad? The acts are not bad, but a parlor is a bad place for a child. Put him in the right sur-

roundings and you will not need to conquer his will nor reform him. This is education according to nature. "Let children be children."

During the first twelve years of the boy's life he is to learn very little of the sort of knowledge usually given in the schools. He needs freedom and strength and the experience he gets from contact with nature. He will know very little of books and he will not have a large vocabulary. He will have words enough to express his ideas, and it is a disadvantage to have more words than he has ideas. Words pass for knowledge but they are not. At the age of twelve Émile will "know nothing by rote, but much by experience." He will not know what duty or obedience means, "but say to him, if you will do this to please me I will sometime do this to please you, and he will instantly exert himself to comply with your wish." These are merely samples of Émile's training. He is very different from the boys trained in the schools. "He is a mature child, and has lived a child's life; his happiness has not been exchanged for his education. . . . Ordinary men would not understand a boy so trained. . . . A teacher could make no parade with him, and could ask him no show questions; and those are the chief of the education of the day." It may seem a little strange that a child should not have the idea of obedience nor even know the word. The substitute for obedience is coöperation. Following the idea of social contract which is the basis of society the child is to learn that others

will do for him in proportion to what he does for them. He is therefore glad to comply with requests. Commands are unsocial, undemocratic, and unnatural, and therefore Émile is to have no such notion.

“All wickedness comes from weakness.” This also may not be wholly true but there is an important truth in it. It is natural for children from kindergarten age to college age to wish to do something, and if possible to do something which will make an impression. If they had sufficient intelligence to do something significant they would be glad to do it, but not being able to think of anything worth while they perform some prank. The desire to realize oneself as a cause for something coupled with the inability to cause something worth while leads to pranks and even to crimes. Men swear because they lack the intelligence and the vocabulary necessary for a better form of impressive expression. Women swear to show off. If they knew enough to make an impression in a better way they would use the better way. Many other examples will suggest themselves to the reader. Weakness may not be the sole cause of wickedness but it is an invariable accompaniment of it, and it seems to be partially the cause.

At the age of twelve Émile has a good body, a good brain, and more than ordinary intelligence. He has more intelligence because he has understood all of his experiences. He has learned little from books but much from nature; he speaks only one language but understands what he says; he knows nothing of

study, and memory is less important to him than is judgment; he knows nothing of customs, and his behavior arises from his own wishes.

At the age of fifteen he is "laborious, moderate, patient, persevering, and courageous." . . . "He can endure sorrow with fortitude, for he has not been trained to oppose himself to fate." He is "destitute of the social virtues." He makes no demands upon others and he acts without respect to others. However, he is approaching the time when he is to develop rapidly into a social being. He will soon become a young man. He will retain his individuality, but it is according to his nature that he should become social. He must learn how other people do but he will not wish to do as they do, he has been trained to follow reason and not custom. Instead of confining his thoughts to his relations to things he will now be concerned with his relations to other people. So far as possible he must learn by his own experience, but it is not safe to learn everything that way, and therefore he may study history. He studies history, however, not for the sake of learning past events, but for the sake of learning the ways of men.

So far *Émile's* life has been an unfolding of his own nature. The important factors in his life have been self-development, self-satisfaction, self-realization, self-expression. These will continue to dominate his life, none will be given up even though he becomes social. Once more the reader is asked to stop and meditate before going on to the next paragraph.

Soon Émile will have a wife. Can he retain all of his individualism and yet enter successfully into a relationship which calls for mutual forbearance, mutual yielding, mutual consideration in nearly everything, giving without measuring returns, and even putting another before self? Has Émile been trained to make adjustments? Or can he find a girl who will make all of them to suit his nature? If she is to do all of the yielding should she be educated according to the same principles as Émile has been? Can you formulate a set of educational principles by which a girl can be educated to be a suitable companion to a man who has been educated according to nature, as Rousseau has conceived nature? When you have answered these questions to your own satisfaction we shall pass to the consideration of Rousseau's answer.

"The whole education of women ought to be relative to men. To please them, to be useful to them, to make themselves loved and honored by them, to care for them, to counsel them, to console them, to make life agreeable and sweet to them—these are the duties of women at all times, and what should be taught them from infancy."

Girls should be taught to be submissive and obedient at all times. They should learn domestic duties, but not scholastic subjects. Literature and art are not suited to them. "A woman of culture is the plague of her husband, her children, her family, her servants—everybody." Girls should be taught the things they

need to know in order to be efficient in housework—that is sewing, cooking, etc.—and they may be taught singing and dancing and whatever will make them attractive to men. A woman should not think things out for herself. She should accept religion and ethical principles upon the authority of others. Such in brief is Rousseau's program for the education of girls. Perhaps it will be admitted that if girls were so trained they would be able to get along with men.

If the reader happens to be a girl she does not like this program. If the reader happens to be a boy he knows that it cannot be done. It is customary to pass over Rousseau's views on the education of women as having little interest and less value. Again we must admit that taken *in toto* his views on women are quite absurd. But there is one point worth noting.

The name given to Émile's future companion was Sophie. According to the story she was given an education for service. Stated in general terms, which is better, an education for service or an education for self-satisfaction? True, no questions were asked about Sophie's likes, or dislikes, tastes, capacities, pleasures, or hopes, but if one's job is already determined should he not be trained for that job even though he may not be fitted by nature for it? The curriculum for the education of Sophie was determined entirely upon the basis of job-analysis. The goal set up for her was that of efficient service. If we criticize Rousseau (and we may) we should criti-

cise the type of life which he believes a woman should lead. If we accept the type of life then the educational program is not so far out of the way.

The naturalistic movement did more to change the spirit and methods of education than any movement ever inaugurated. Rousseau was its most conspicuous champion. In the first place he convinced the world that the nature of the child should determine education. The idea of following nature was not wholly new but Rousseau presented it with greater emphasis. He reached people of both high and low degree. He prepared the way and furnished the inspiration for the widespread psychological, scientific, sociological, and democratic movements which have made modern education. That one man should be able to do all of this and not make any mistakes would be too much to expect.

Since naturalism was so largely a response to the felt needs of the time it was certain to be in some respects shortsighted. Even the meaning of the word natural is not quite clear. It may be opposed to unnatural, or to cultivated, or to artificial, but whichever it meant it offered a contrast to the prevailing ideas of the previous one-and-a-half thousand years. To be too natural may be undesirable, but to be unnatural is surely bad. Naturalism offered a great improvement for educational doctrines, but it has its weaknesses. Chief among these is that it fails to look forward. It lives by the past for the present. It has no goal and no purpose beyond immediate satisfac-

tion. It is essentially selfish. Naturalistic ethics at best can be nothing more than prudence. The laws of nature hold among inanimate objects and animals as well as among men. If ethics is based solely upon the laws of nature then animal ethics is the same in principle as human ethics. The term nobility of conduct has no meaning. Conduct may be efficient but not noble.

Perhaps it is not rational to be so much concerned about the unknown future and our constantly changing goals, but these factors have had much to do with the direction of the world's progress. It is not quite clear why a thoroughly consistent naturalist should wish to be remembered or wish a monument, but he seems to desire to make an impression upon the world and to change the world to fit his concepts. The formation of concepts of a better world than we now have implies a certain type of idealism which every reformer must have. Rousseau sought to bring about a world such as he had never experienced and such as had never existed before. This world of perfect harmony and happiness was the product of his own intellect and not of his instincts. He wished people to strive to create a world far better than that which their impulses had created. The purpose of education is to prepare men to create such a world. Rousseau has always been classified as the great naturalist, but he might well be classified as the great idealist.

CHAPTER XX

PESTALOZZI

THE world into which Pestalozzi came was a world of poverty, distress, ignorance, hopelessness, irresponsibility, and depravity. Wars and other political and religious struggles had left great numbers of people destitute both physically and spiritually. Pestalozzi was by nature emotional and sympathetic. In the usual sense of the word he was not practical. If he had been, we should not know of him today. If he had been a keen, practical business man he would have known that he could not do the things he tried to do. Even the fact that he did not learn by failures is responsible for much of his contribution to the progress of the world.

Early in his life Pestalozzi acquired a piece of poor land and built a house on it. The place was not worth a name, but it received the name Neuhof, and that name has become historic on account of the institution which Pestalozzi founded there. Since there were so many forlorn children in the community Pestalozzi thought he could help them by bringing them to his farm where they could receive food, clothing, shelter, and education. He expected them to work at farming during the summer, and inside the build-

ings during the winter. They were to be taught while they worked. The conversation was to be educative, and the activities were to be educative in that they would develop skill, and, most of all, the children were to learn thrift and responsibility and acquire a spirit of happiness which should be manifest in all of their activities and relationships.

At first the plan worked well. The children improved physically, mentally and morally. Pestalozzi attempted to enlarge the enterprise and accommodate more children. This brought financial difficulties.

The more serious difficulty came from human nature. Pestalozzi and his wife were giving their lives and all of their worldly possessions to help poor children. These children and their parents, when they had any, should have been grateful, but alas! Pestalozzi had a sorrowful lesson to learn, and through him the world may learn the same lesson. Gratitude as well as nearly all other virtues has to be learned by slow degrees. It was soon discovered that Pestalozzi was "workable," and children came to him to get whatever they could in the way of clothing or food, and then ran away. Many were encouraged to do this by their indigent parents who neither understood nor appreciated what was being done for the children. They cared nothing about the training their children could receive. They were too shortsighted to see that Pestalozzi was giving all and receiving nothing, and that the benefit was theirs. Perhaps they did not know that he often went hungry that others

might be fed. No doubt this shortsightedness partly accounted for their poverty. With much sorrow Pestalozzi had to abandon this unique home-school. It was pronounced a failure.

Most men would have been discouraged, and would have said, "If these people act like that let them look out for themselves." Pestalozzi was not a great psychologist, but he had a keen insight into human nature, and he realized what few people realize, viz., that education is a development of the whole being, and not merely a matter of adding a little erudition, which may produce but slight effect upon the individual. He found no fault with any one and blamed no one. He was more than ever firmly convinced that these children needed training. When food does not agree with a baby we change the food, we do not throw away the baby. When a doctor finds that his medicine does not help his patient he tries changing medicine, rather than changing patients. If the instruction we give does not improve Johnny what should we do? Try to find something which will help Johnny or send him home and look for another pupil who will be helped by our instruction? Pestalozzi took the former course.

Where grows, where grows it not, if vain our toil
We ought to blame the culture, not the soil.—Pope.

It is our job to find out what will benefit the pupils most, not to find out which pupils can swallow the greatest amount of our curriculum. This attitude

toward pupils was new. The world has been tending slowly toward that attitude ever since. During the last decade progress has been much more rapid than ever before.

Before considering Pestalozzi's contributions to method it will be well to review briefly the educational situation of Pestalozzi's time. Great men had written well on the subject of education but their views had had but little effect on the ordinary schools. Schools were usually conducted in uncomfortable, unsanitary, unequipped buildings; the curriculum was useless, uninteresting, empty, and yet formidable; the methods of teaching were confined mostly to methods of punishment. Compayré, in his *History of Pedagogy*, quotes an account of a teacher who had given 911,527 canings, 124,010 whippings, 10,235 boxes on the ear, and other punishments in proportion. These figures are obviously mere fiction, but they suggest the ideal of the times. A school was a disagreeable place where pupils were punished much and learned little. The teachers were rude, cruel and ignorant. The contrast between this type of school and that conducted by Pestalozzi was so great that it is no wonder people could not comprehend what was being done.

If the term humanistic could be used to mean filled with human sympathy, having interest in human beings, and willing to serve human needs, then Pestalozzi would be a great humanist. But the word was captured by another type of educators, and its

meaning is far different. There is no good word to describe Pestalozzi. Humanitarian approaches the meaning. He loved people—not people in general, like Rousseau, with evanescent sentimentality—but real, individual people whom he was willing to help with his hands, his head, his heart, and his money. He was the product of this sympathetic nature, of the conditions of the people among whom he lived, of the influence of Rousseau whom he followed in theory, of his mother, and of his grandfather. His grandfather was a preacher, and young Johann Heinrich spent part of his boyhood with him. It has been said repeatedly that Pestalozzi's sentimental and impractical character was due to the fact that his father died while Johann was very young and hence he never had the stable, and perhaps stern, guiding influence of a father to make a man of him. This is altogether unreasonable, but it may be passed on as a bit of harmless literary gossip.

During the present century we have seen a renewed interest in adult education, and many people think this is something quite new. As a matter of fact it is primary education that is new. Early Christian education was planned entirely for adults. The church leaders forgot that the Master picked up a child and said, "Of such is the kingdom of heaven." Early monasticism had no thought of children. The Renaissance education was for a selected type of adults. Even the Reformation, with its splendid ideas of individual development, thought only of adult needs.

"Women's rights" in education came in with the Reformation, but "children's rights" had to wait till the coming of the naturalistic movement in the latter part of the eighteenth and first part of the nineteenth centuries. Rousseau heralded them and Pestalozzi secured them.

With Pestalozzi the idea "Let's do it" was never disturbed by its reluctant companion "Can it be done?" He had the explosive type of will which immediately starts to put into action any suggestion which seems good. When he read Rousseau and found some good ideas he was ready to put them into practice. Rousseau wrote literature, and it would have remained merely literature if some one of a different type had not taken up some of his principles and applied them. Pestalozzi owes much to Rousseau, but also Rousseau owes much to Pestalozzi. People read what Pestalozzi wrote, but a great part of his influence was due to the fact that many people came to see him doing things. His great joy was in doing.

Thoroughly to systematize Pestalozzi's educational theories would be to make them un-Pestalozzian. He was never systematic, and he had no system. He had a lot of ideas. These are what we should look for if we wish to get what he contributed. Perhaps the easiest way to get some of these ideas is to read some or all of his *Leonard and Gertrude*. This is an interesting story of a poor woman who has a lot of children, and a husband who would be good if

it were not for drink. This intelligent mother of a large family is the heroine of the story. Leonard is not a villain, but a victim. The dramatic part of the story, though entertaining and instructive, will be passed by without attention. The educational methods will be all that we can consider at present.

Again, will the reader pause and try to put himself in the place of Gertrude? Suppose you had a group of children to educate, and could not send them to school on account of poverty. The program mentioned in paragraph two of this chapter will in part guide you. Perhaps we can construct a home situation after the model of Pestalozzi. We shall not try to quote Gertrude's procedure in detail, but rather try to get the spirit and method as it might be carried out now. The first thing in the morning is to wash and dress. This will afford occasion for conversation about hygiene and sanitation, taste, manners, and system. Planning the work for the day offers an opportunity for system. The fire should be built with intelligence, as well as with kindling. To do this requires a fair knowledge of oxidation and all of the other factors which enter into combustion. The average high school pupil of today thinks the purpose of the chimney is to let the smoke out. How few understand the essential principles of drafts and check drafts and air circulation either through the fire or through the oven! A great deal of physics could be taught while building a fire and controlling the heat to bake biscuits. Then what about biscuit? Why do

we use baking powder with sweet milk and soda with sour milk? Some of the very fundamentals of chemistry are shown here. Acid and alkali, their relation and their action can be taught here as easily as in a laboratory, and far more pleasantly and with more lasting results. At breakfast there will be a discussion of foods, food values, food composition (chemistry), and geography almost without limit. Talking about the places from which food comes, how it is raised and how it is treated after it is gathered, how it is shipped, the economic problems involved in production and distribution involve a wide range of knowledge. There is an opportunity to teach a large amount of science, both pure and applied.

Washing dishes, sweeping, and dusting offer little variety, but these things must be done. What can be done to relieve drudgery and at the same time provide education? As soon as these activities become mechanical the mind will be free to think of other things. It is thinking about the work that makes it drudgery. Getting the mind off will afford relief. This is the proper time for cultural education. What can be learned which will make life richer and pleasanter without regard to efficiency? Music and literature are most easily available for this purpose. Songs can be learned and sung together, poems can be memorized and quoted, verses of scripture learned and their meaning discussed, stories read the night before may be talked about, and anything of interest or entertainment can be brought up. With all of these

pleasures provided the dish washing hour will pass too soon and the time will be too long till the period comes again.

The above was given as an illustration of the way Pestalozzi would have children taught. Why should we have schools if homes could offer such educational advantages? The home has its limitations. There are some things belonging to a complete education which cannot be included in this home program. A more serious difficulty is the inability, or lack of inclination on the part of parents to give the education. The purpose of the school is to supplement the home and to supply the deficiencies of the home training. Learning in connection with activities affords the best conditions for education. Our next problem then will be to conduct a school in a way to preserve this valuable method and happy, coöperative atmosphere.

Pestalozzi tried to do this in his school. He expected his pupils to work part of the day and study part of the day. His own personality was responsible for the happy atmosphere. This cannot be reduced to rules. It can hardly be described. It can only be felt, yet it is a very positive factor in a schoolroom. It did not come as a matter of studied planning, but it attracted much attention.

The Pestalozzian method was the outcome of continued, serious study. It was first of all an objective method of teaching. Protests against the formal, symbolic, merely verbal type of teaching have been many, but symbols are so easy to manage, and so

easy to score that teachers stick to them. Yet knowing symbols does not necessarily mean having ideas. Pestalozzi wished his pupils to get ideas rather than mere words, and he wished them to be something, rather than merely know a few statements. Each child was expected to be "skillful, intelligent, and active to the full extent that his age and development allowed." Children were taught to speak well before they were taught to read or write. This seemed the natural order. Knowledge is valueless unless it has a basis in action. Verbal knowledge must always be connected with real things or with actions. The story has been told many times of an American boy who habitually said, "have went." His teacher to break him of this and to teach him the right form required him to stay after school and write "I have gone" one hundred times. When he had finished his task the teacher was out of the room, and the boy laid the paper on her desk with the following note: "I have wrote it one hundred times and have went home." The teacher was completely discouraged. The boy had written the correct form one hundred times and still did not seem to know it. If she had read and comprehended Pestalozzi she would have known what the trouble was. If the reader will try a simple little experiment the case will be clear. Just walk around the room and repeat the words, "thee, thine, thee, thine" five hundred times. By that time the words and their pronunciation should be pretty well fixed. Then see if you feel like saying,

"Will thee tell me if this book is thine?" It is quite obvious that words learned that way do not make language. When the boy wrote "I have gone" it expressed nothing. If each time he wrote it or said it he had expressed a thought the words would have meant something and he would have formed the habit of using them to express meaning. In all of the language work Pestalozzi tried to have the words connected with objects. His schoolroom was almost devoid of equipment, and there were not very many things to talk about but the pupils did the best they could to find actual objects as subjects for conversation. A good supply of pictures would have been a great help, but it was not easy to get pictures in those days, and Pestalozzi had none. So far as the method was concerned, however, a window or a hole in the wall would serve. Such sentences as, "I see a hole in the wall" and "The window has four panes of glass" were used almost to the point of weariness. Still, that was better than using empty sentences which expressed nothing. The wonder of it is that so much could be done with so little to do with.

Pestalozzi wished all instruction to begin with the observations which the child could make for himself. He believed that education begins with sensations. In this he followed Locke. As the child grew the instruction should be fitted to his stage of development. He accepted the common branches as appropriate subjects of study, but wished children to be taught to appreciate the beautiful.

Pestalozzi's contribution to the subject matter of education was very little. Certainly his contributions to administration amounted to nothing. It is in the fields of method and aim that his great service lies. His devotion to natural and objective methods has already been mentioned. He realized a need which he himself could not supply—that is, a need for an educational psychology which would give to teachers a true basis for their methods of instruction. To suggest an educational psychology was a contribution. Among the visitors who came to Pestalozzi's school was the great philosopher, psychologist and educator, Herbart. He was favorably impressed with the work he saw being done, and he readily recognized the need for a psychology which would function in the schoolroom. He accepted the task and at once set about to produce such a psychology.

As important as the change in method was the change in aim. To teach had meant to give information. To Pestalozzi it meant to develop the child in accordance with his inborn faculties. To teach a child properly it is necessary to know what his possibilities are, that is, what he should become, not merely what we should like him to be. Education then is continuous development. Education is the result of natural and spontaneous action of the mind. It is not something poured into the mind. The child must learn by his own experiences and not by memorizing words which express the thoughts or experiences of others. With all of the emphasis upon the natural and easy

methods of learning Pestalozzi continually stressed the value of work and effort. He required every pupil to work part of the time and in his study he expected work. He made the schoolroom pleasant, and controlled the pupils by love but this was never intended to remove exertion. Part of the method of development was to teach the habit of putting forth effort.

This account would fall far short of representing Pestalozzi if mention were not made of the important place which he gave to religious teaching. While he followed Rousseau in most respects he did not in respect to religious teaching. Rousseau would have the child taught nothing about God until he is old enough to understand. Pestalozzi would have him taught religion continually.

If the work of Pestalozzi were to be evaluated in a single word that would be inspiration. He provided suggestions and inspiration to many educators. In the next two chapters we shall follow two lines of educational progress growing out of Pestalozzi's work. Froebel and Herbart both studied under him and took the start for their respective systems from him. They saw different phases of education and presented very different theories but both were based directly upon the ideas and practices of Pestalozzi.

CHAPTER XXI

FROEBEL

THE mention of Froebel suggests the kindergarten, because that branch of the school system is known to every one, and perhaps it was Froebel's greatest contribution. In the first place the kindergarten was incidental to his theory of education. He set out to construct a philosophy of education, and in that he gave prominent place to the education of children. He was fifty-eight years old when the first kindergarten was established. To understand the kindergarten as Froebel conceived it it will be necessary to consider first his philosophy of education. His chief published work was *The Education of Man*. The student should read a few pages of this in order to get his spirit, his style of writing, and the character of his thinking. The book is rather difficult to read. Abstruse, fanciful, and sweeping statements are mingled with commonplace suggestions. The book, like its author, is entirely unique. The reader feels that the book is very mystical but the author very human. One may read page after page and find nothing worth thinking about except repetitions of what he had said before, but often in an unexpected connection he will find a brilliant and

far-reaching idea which, in all probability, means more than Froebel himself thought. Out of these scattered gems we can build a system of education of great merit, even though it may have some defects.

It was said in the previous chapter that Pestalozzi was brought up by an over-sympathetic mother. Froebel lost his mother when he was only a baby, and had the care (it might be more accurate to say neglect) of an under-sympathetic step-mother and a harsh clergyman father. Perhaps his unhappy childhood and lack of affection gave him sympathy for children. For a few years he lived with an uncle who seems to have done for him about all that an uncle could do for a boy whom no one understood. He was always thinking his own thoughts, and these thoughts were different from those of other people. At school he was regarded as dull because he did not see much of interest in the things that were taught to him. He was not encouraged to go to school, because neither his teachers nor his relatives thought he could profit by it. From childhood he was fond of nature. At the age of fifteen he began working for a forester. He continued this for two years. He enjoyed nature and he liked to make interpretations of things. Wherever he went he carried his own world with him. He became very much interested in science and finally got permission to go to college, where he selected scientific and philosophical studies. His interest in science was not so much in the details themselves as it was in the cosmology of the universe

which he saw manifested in every object, animate or inanimate.

While Froebel was to an unusual degree the product of his own peculiar nature there were numerous influences which helped to determine the particular line of thought which he followed. His early home life drove him to himself a great deal and gave him time to meditate in his own way. This plus the work he had to do as a boy brought him in contact with nature. From nature he seems to have gotten a considerable part of his philosophy. However, in his observations of nature he did not take nature as it is. He read into it his own thoughts. He expressed himself to nature rather than allowing nature to express itself to him. The idea of evolution was coming into prominence and Froebel accepted this with enthusiasm. The subtle idealistic philosophy of his day fitted into his nature and he was profoundly influenced by it. He read Comenius and no doubt that educator's suggestion of a "School of the Mother's Knee" helped to give him the idea of the kindergarten. More than two thousand years ago Plato had said that the child should learn through play, but that excellent idea remained a utopian fancy until the modern conception of a child-centered education afforded a place for it. Froebel read Rousseau, and accepted some of his fundamental principles, though as a whole his educational theory was very different. Rousseau's statement that "all things as they come from the hand of God are perfect," his emphasis

upon the rights of childhood, and his exaltation of nature were accepted by Froebel. Finally Froebel worked directly under Pestalozzi from whom he got a few ideas and a great inspiration. While teaching under Pestalozzi or in some other school modeled on the Pestalozzian type Froebel learned child nature, and he had experience in the use of objects as a means of instruction. While he received much from all of these sources he was by nature introspective, self-centered, self-expressive, and not very receptive. His vision was always colored with imagination.

After this much of general description of the man we shall pass to a consideration of his educational theory as presented in *The Education of Man*. The opening sentence states the basic principle of his thoughts, "In all things there lives and reigns an eternal law." The following sentences selected from the first two pages will indicate the general scheme of his educational philosophy: "This all-controlling law is necessarily based on an all-pervading, energetic, living, self-conscious, and hence eternal Unity. . . . This Unity is God. . . . In all things there lives and reigns the Divine Unity, God. . . . The divine effluence that lives in each thing is the essence of each thing. It is the destiny and life work of all things to unfold their essence. . . . Education consists in leading man, as a thinking, intelligent being, growing into self-consciousness, to a pure and unsullied, conscious and free representation of the inner law of Divine Unity, and in teaching him ways and

means thereto." It is therefore the destiny of man to "render his essence active, to reveal it in his own life with self-determination and freedom."

Plants and animals are allowed to grow "in accordance with the laws that live in them." They show "a pure inner life, harmonious in all parts and features, . . . Thus, O parents, could your children, on whom you force in tender years forms and aims against their nature, and who, therefore, walk with you in morbid and unnatural deformity—thus could your children, too, unfold in beauty and develop in all-sided harmony!"

All of this agrees very well with Rousseau's contention that nature is good and perfect, but Froebel does not stop there. Rousseau was satisfied to let nature alone, it would take care of itself. Froebel would provide a much more active program. Nature must be expressed. Knowledge is creation. The purpose of education is to "give men to themselves." Education is not a receptive process, it is an unfolding process. "Man works only that his spiritual, divine essence may assume outward form, and that he may be able to recognize his own spiritual, divine nature and the innermost being of God." . . . "The young, growing human being should, therefore, be trained early for outer work, for creative and productive activity." Froebel believed strongly in the educational value of work—not for the sake of vocational training, but for the sake of developing the inner nature through self-expression. Work develops the

whole being—even the religious nature. “Early work, guided in accordance with its inner meaning, confirms and elevates religion. . . . Work and religion must be simultaneous; for God, the Eternal, has been creating from all eternity. Were this fully recognized, were men thoroughly impressed with this truth, were they to act and work in conformity to it in life, what a height could mankind soon attain.”

Froebel was very fond of drawing lessons from objects of nature. He found a rich field for thought in the crystal. “The crystalline is the first phase of earthly formation.” After giving a long description of the crystal and its properties he makes a comparison to human life in the following words, “In the entire process of the development of the crystal, as it is found in natural objects, there is a highly remarkable agreement with the development of the human mind and the human heart. Man, too, in his external manifestation—like the crystal—bearing within himself the living unity, shows at first more one-sidedness, individuality, and incompleteness, and only at a later period rises to all-sidedness, harmony, and completeness. Like all similar facts, this analogy in the development of nature and of man is very important for the purposes of self knowledge and of the education of self and others; it throws light and clearness upon human development and education, and gives firmness and sureness of action in their various requirements. Like the world of the heart and mind, the world of crystals is a glorious, instruc-

tive world. What the spiritual eye there beholds inwardly, it here sees outwardly."

It is very doubtful if any one besides Froebel could get all of this from the study of a crystal. It is doubtful if it has all of that meaning to the greatest crystallographer in the world. Nature, no doubt, suggested many things to Froebel but he suggested more things to nature. Nature helped him to express himself. He was fascinated with form and number. The sphere and the crystal were to him the most significant forms. He saw manifested in these forms the laws of the universe and of human life. Numbers also indicated to him the laws of nature. Speaking of the number five he says, "As developed under the influence of life force it is truly the number of analytic and synthetic life, representing reason, unceasing self-development, self-elevation; for, the higher the stage of development reached by the life forms, the more persistent is this number."

Froebel's view of college is interesting to note. He says, "One of the purposes of college, indeed, is to open the inner eye for outer and inner truths; but it were sad for humanity if only those who go to college should learn to see. On the other hand, if parents and teachers teach children at an early period to see and think, colleges would again become what they ought to become, viz., schools for the study of the highest and most spiritual truths; schools for the representation of these in the life of the students; schools of wisdom."

Much that is in *The Education of Man* is vague, fanciful, far-fetched, impractical, and possibly even senseless, but while it is lacking in clear ideas it is rich in suggestions. By a little care in selection, elimination, and interpretation it is possible to find amid the symbolism and analogy the source of many of the educational ideas and practices which are in favor at the present time.

The emphasis placed upon the universality of natural law shows a marked advance over the ideas common before the time of Froebel. Few had realized that the laws of nature apply to man as well as to inanimate objects, plants, and animals. Man is subject to law and cannot escape it. Forgiveness is a pleasing conception but nature never forgets and nature never forgives. The conception that God is love is beautiful and it may be true, but it is also true that God is law. There is no such thing as sowing wild oats and not reaping the consequences. There is no such thing as doing anything and not taking the consequences. It is not possible to violate a law of nature.

The fundamental law is Unity. It is the internal and eternal unity of all things which makes this a universe and not a multiverse. The law that controls the atom controls the human being, the nation, and the world. Expressed in spiritual terms this unity is God. The essence of the universe is God. This conception takes in the doctrine of evolution but it goes much further. It includes more than the scientific viewpoint. The story of evolution, told in the

wonderful lines of W. H. Carruth, expresses two conceptions.

A fire-mist and a planet,
A crystal and a cell,
A jelly-fish and a saurian,
And caves where the cave men dwell;
Then a sense of law and beauty,
A face turned from the clod—
Some call it evolution,
And others call it God.

Froebel would call it both. The oneness of the universe includes God. It is the business of education to fit the individual to the world of nature, of man, and of God. A great part of this can be done by direct contact with nature—the work of God. God always works, and is primarily creative. It is man's business to work and be creative. The study of nature is fundamental not so much because of the value of the particular objects in nature but because of the story of the universe which nature tells. "The things of nature form a more beautiful ladder between heaven and earth than that seen by Jacob. . . . Not in dreams is it seen; it is permanent; it surrounds us on all sides."

Applying this to the curriculum and to methods of teaching it means that *meaning* is the goal of teaching. Facts are of little consequence except in so far as they mean something for life—for eternal life, but eternal life is not merely a life beyond this one; everything is eternal. There is a moral lesson in this.

A common cause of evil is the thought that this act is merely an isolated particular act, that it has no universal significance. If every one realized that every act had eternal significance he would be more careful of his conduct. Froebel himself regarded the sphere as the symbol of unity because it had one surface, and every point on the surface had the same relation to every other point. There is no diversity. This symbolism seems less important to us than it seemed to Froebel but we shall be following Froebel in spirit if we try to get out of his statements the deepest meaning without quibbling over the form of statement or the terminology.

Froebel held that instruction should relate to life activities. Since Froebel himself gave nearly all of his time to primary education he did not carry this idea very far and the full significance of it was not realized until very lately. Within the last decade educators have made a serious study of curriculum construction, and they have attempted to build the curriculum to fit the pupil to life activities. In other words what Froebel tried to do for little children we of the twentieth century are trying to do for high school and college students. It seems that the world never comprehends an idea until it has the proper setting for it. Often it seems necessary to wear an old idea out before we can receive a new one.

Creative education is so new that we hardly have it yet. Froebel regarded the school as an institution whose chief purpose was to encourage creative ac-

tivity on the part of the pupils. He stressed the idea but did not show very clearly how it could be accomplished. Self-initiated activity is educative no doubt, but it does not always give the desired result. The activity must be stimulated by external means, and the self which is expressed by the activity is the result of external influences as well as of internal tendencies. Nevertheless, even though we do not always know just how to secure the desired results, it is an improvement if we can get away from the idea that education is entirely a pouring in and molding process. To a certain extent every self is its own other, and every self expresses itself. This self-expression is a large factor in education.

To guard against an undesirable development of the self, resulting in social misfits and lack of harmony, Froebel provided carefully for social training. Unlike Rousseau, he wished the child to have a very early social training. He got this training by direct participation. He was to learn early that he must make adjustments to others in order to have them make adjustments to him. If he preferred to remain apart from the rest he could do so, but as a rule it is not in accord with child nature to do this. His social nature demands expression.

The kindergarten is now known everywhere, and it is generally accepted by educators, but it was not made all at once, and it did not secure a place in the educational system without a struggle. The first obstacle, as we should expect, was indifference, but that

was not all. The Prussian government suppressed the kindergartens for a period of ten years. There was no good reason for this but the officials did not understand the nature of the work and they were afraid that revolutionary ideas would be developed. Froebel was teaching self-activity and individualism and this might lead to a demand for individual freedom and democracy which would be antagonistic to the Prussian conception of government. In the United States there was not such feeling, and after kindergartens were established in this country and people found out about them they grew in number very rapidly. The first public kindergarten was established in St. Louis in 1873 under the influence of Dr. William T. Harris, then Superintendent of Schools for that city.

Froebel, no doubt, overestimated the possibilities of creative activity and self-expression on the part of the child. He failed to realize how little the child has to express and how limited are his creative powers. Before he can make the inner outer he must have an inner. The child is ready to create and ready to express. He has a creative and expressive nature. Parents and teachers had not realized this, and they were not making use of the most effective means of education. Froebel saw that a child naturally learns by doing, but he did not realize to what extent he was suggesting what the child should do and therefore what he should learn. He did not realize to what extent it was necessary to make the outer inner

before he could make the inner outer. Nevertheless he provided, perhaps somewhat unconsciously, the means of doing just this. He created situations which were suggestive to the child. This is the key note to kindergarten work. Suggested activity takes the place of forced receptivity. Also it is to be noted that the child's learning comes through the activity rather than through the receptivity. He may not be able to think of anything to do until it has been in some way suggested to him, but suggesting it to him does not teach him so much as does his own performance after the suggestion has been made. This was an important contribution even though Froebel did not completely understand the entire process. In a kindergarten the children do things, they play, sing, make things; they are surrounded with objects of interest, partly to look at and partly to use, they have freedom within limits and they are told stories to which they like to listen—in other words they engage in human activities. Many of these activities are such as grown people engage in, and thus the children are prepared for later life.

In the opinion of Rousseau there was antagonism between the natural and the social. Froebel combined the two, and in a natural way gave children social training. This social training included several phases. One consisted of games to help the child learn to adjust himself to other children. In order to play together with the greatest satisfaction there must be a give and take, a spirit of coöperation, pleasures

increased by being shared, relations smoothed by courtesy, and the manners and forms of social practice learned and made habitual. Another phase of social training was accomplished through dramatization and imitation. A child who has played being a merchant, a doctor, a farmer, a carpenter, a fireman, has gained some appreciation of the services of men in those callings. Another phase of social training consisted in conforming to rules. This is our old friend, obedience, enforced with a new spirit. Obedience no longer for the sake of obedience, but for the sake of order, and the convenience of all. There is nothing wrong in itself in coming to school at 9:10 instead of 9:00, but in order that we may all work together it is necessary that we all come at the same hour. Many of our rules and regulations are just for the sake of uniformity, which in turn is for the sake of the convenience of all. Children will quickly recognize this.

Pestalozzi had discovered the value of objects when used as means of instruction, but he did not use very many objects in the schoolroom. The kindergarten uses sand, paper, wood, wax, and many other materials with which the children can make things. Colors are found everywhere because they are pleasing. The dull, dreary and unattractive interiors of the schoolrooms of a century ago fitted very well with the drab lives the pupils were expected to lead but they do not fit the spirit of the kindergarten, which is above all cheerful, happy, refreshing,

and inviting. Froebel even suggested manual training for the higher grades but he never developed the idea with actual exercises. He recognized the desirability of acquiring skill.

Looked at from a broader point of view the program outlined by Froebel means a very much broader curriculum, the spirit of Pestalozzi manifest in the schoolroom, a social education according to nature instead of contrary to nature, the child-centered education as advocated by Rousseau, an education through activity rather than through mere receptivity, a moral training through growth rather than through formal precepts, child life made happy and fruitful through self-expression rather than constrained through repression, fitting for life activities by engaging in life activities, and a recognition of the natural goodness in child nature.

CHAPTER XXII

HERBART

HERBART was born in the year of the American Declaration of Independence and lived till 1841. He was not greatly influenced by the political, religious, and economic struggles of this period, but he was influenced by the thought life of his century. He was first of all a philosopher, and it is the business of a philosopher to deal with large problems rather than with temporary, local conditions. He was also a psychologist, and a teacher. As a teacher he had a short experience as tutor to a few children. While doing this he became interested in the theory and practice of teaching, and he began early to write out his views. Early in his career he paid a visit to Pestalozzi at his school in Burgdorf. He became very much interested in Pestalozzi and his writings. He saw the value of his work, and wrote articles about it. Pestalozzi had emphasized the need of a psychology which should furnish the basis for effective teaching, and give sound principles upon which a scientific method of instruction could be developed. Herbart quickly realized the need and set for himself the task of working out such a psychology. He was one of the ablest and best trained

men in Europe at the time, and it is very fortunate for the world that he became acquainted with Pestalozzi and his work at just the right age to be most effectively influenced by the reformer whose vision was wide though somewhat dim.

Herbart continued his study of philosophy, and became a distinguished professor of philosophy, but he devoted much of his time to education. While a professor of philosophy of Königsberg he established a practice school, partly for the sake of educational experimentation and partly for the training of teachers and supervisors. An educational seminar was conducted along with the practice school. The aim of the entire program was the scientific study of education. This was the beginning of organized scientific study of education in a university. The enterprise proved successful. A similar plan was followed by other universities, and at present every university of any size has a department of education.

The biography of a philosopher is a record of his thoughts. Little need be said of his career. As a child Herbart was profound for his years, and as a student he was a serious, independent thinker. The greater part of his life was spent as a professor in the University of Königsberg and in the University of Göttingen. Our interest will be almost entirely in his contributions to thought.

Pestalozzi had made much of the objective method of teaching. Locke had said that learning begins with sensation, and he had compared the mind

to a blank tablet upon which experience writes. Herbart's view of the beginning of consciousness may well be compared with Locke's. There is an important difference between the two, but they agree that consciousness begins with sensation, and develops through sense experience. According to Locke the mind is a blank at first and passively receives one sensation after another and thus a store of experience is accumulated. Herbart regards the mind as empty at first but it has one very important capacity—that is, the capacity to “enter into relation with the environment.” This capacity makes the mind active from the start. It not only receives, it takes from the environment. Furthermore the mind is permanently modified by every experience. This is the fundamental principle upon which Herbart bases the whole process of intellectual and moral development. Sensation number two does not result in the same experience as it would have produced if it had not been preceded by sensation number one. Each experience in part determines the next experience. This principle should be kept in mind all of the time while studying Herbart. Past experience determines present experience, and present experience determines the future experience. This gives the teacher the key to intellectual and moral development.

The term applied to the process by which a sensory impression becomes a complete percept is *Apperception*. The constitution of the mind determines what and how it assimilates. Apperception denotes

the reaction of the mind to the material presented to it. The consciousness of any object depends even more upon the mind's reaction than it does upon the nature of the object. Spinoza expressed the idea very effectively when he said, "Peter's idea of Paul depends more upon Peter than upon Paul." If Peter were an ignoramus he could not perceive Paul as a scholar. Wherever we go we see whatever we have a "mind set" to see. There is an old story of a boy who sat up on a limb of a tree and watched people go by. One man passed by and looked at the tree and said, "There ought to be a squirrel's nest in that tree." The boy said, "Good morning, Mr. hunter." The next man who looked at the tree said, "Isn't that a fine, straight tree, free from knots?" The boy said, "Good morning, Mr. carpenter." The next man said, "Isn't that fine bark on that tree?" The boy said, "Good morning, Mr. tanner." And thus through the morning this imaginary boy with an unusual bent for applied psychology watched the passers by and determined their mental make-up by the ways in which they apperceived the tree. A little girl of two was stung by a bee, and told of it by saying, "bad fly cut." Evidently she had never been stung, but she had been cut, and she interpreted the new experience in the light of her own limited experience. With the same data the most profound naturalist could do no better. A little girl who had always lived in New York City was taken to the country. One day after watching a cow for a few

minutes she went into the house and said to the lady, "Your cow is out under the Christmas tree chewing gum." The only evergreens she had ever seen were those shipped into the city for Christmas trees, and the cow's action was very much like that of people when they chew gum. The girl's intelligence was perfectly good but her background of experience gave her what is to the rest of us a rather odd apperceptive basis.

Apperception is closely akin to association, but it is more immediate. It does not result in a felt combination of items but in a fusion of them. As a rule we do not distinguish between the present presentation and the past experience which enters into a particular percept. For purposes of practical behavior or thought we do not need to distinguish. Both factors enter into every experience, and education consists in providing ever new and richer bases for interpretation, in securing ever more fruitful combinations. The mind is never passive. It is made up of what the senses take out of the total chaos of presented stimulations. With increase of education the number of notions into which things fit becomes larger and more adequate. "Unto him that hath it shall be given" applies even more to intellectual than to financial acquisitions.

The teacher's problem is not so much to see that there is an apperceptive basis for every presentation as it is to see that there is the right basis. Mere connections are easy to make, but the point is to

make desirable connections. The progress of knowledge has been largely a matter of changing our notions about the connections between things. The cosmology of the Greeks differs from ours chiefly in that they connected the sunshine and the rain, the seasons, the growth and decay, and all natural phenomena with different things than we do. Their mental processes were not different from ours. Hippocrates' views on medicine have no such force today as do Socrates' views on morals, because our apperceiving basis for morals has not materially changed, but our apperceiving basis for natural phenomena has changed.

To determine the desirable apperceptive basis for a particular subject is not always easy. A teacher may use a perfectly good method of teaching, but because the connections made are undesirable the result may be bad. It is necessary to know the goal before the approach can be determined. The approach to literature which has as its purpose the development of appreciation may need to be very different from the approach to some scientific topic. To approach a subject properly a teacher must not only see the setting of the subject but he must also see the view point of the pupils. He must know how they see things. Herbart used the term *circle of thought* to denote the mold into which sensations fit, but this term has not been very popular. It should be noted in passing that the matter of terminology has a great influence upon the notions of people.

Very much of the behavioristic psychology of today is merely Herbartian psychology expressed in different terms. Mind-set and readiness are popular terms expressing the principle of apperception.

Another favorite phrase of Herbart and his followers is *many-sided interest*. This expression may be a little misleading. It does not mean scattering one's knowledge miscellaneously over a wide field and knowing nothing in particular. It means that the pupil must have a sufficient number of interests to enable him to perceive things completely. If his interests are too narrow he will perceive only limited phases of an object. The term many-sidedness of interest has been suggested. Whatever term we use we must recognize that the background of thought determines thought.

In order to help teachers to make proper use of his educational psychology Herbart elaborated a method based upon certain steps in developing the recitations. These steps have been used a great deal, and they have been expressed in different ways by various followers of Herbart. Herbart's own way of expressing them is not so very clear. At least it is not easy to grasp. We shall try to indicate the plan but shall be guided in part by McMurry in respect to terminology. If the reader will pause and think carefully he can reason out for himself what the steps must be. It will be obvious that in the preparation and presentation of any lesson the first thought must be of the pupil. We commonly say that we

teach history to Johnny. It would be better pedagogically, if not grammatically, if we should say that we teach Johnny to history. In order to teach anything to Johnny we must know something of his circle of thought, or his interest, or his apperceptive basis, or his mind-set, or whatever you wish to call his mental equipment with which he will grasp, necessarily in his own way, whatever is presented to him. The teacher must ask what must Johnny know in order to learn this lesson? How much of this which he must know does he already know? If we subtract what he does know from what he must know we shall see what he must be told before he can get the lesson in the way we wish him to get it. How much of the time do we know what our pupils think when we talk to them or when they read what we assign? A teacher in New York City told one of her pupils—a little girl of twelve—that she came from Ohio. The little girl said, "O! yes, Ohio is pink, isn't it?" The teacher in surprise asked, "What made you think that?" The girl said, "Why, it is pink in my geography." Why shouldn't she think it was pink? She had never seen any state. She had scarcely seen a bit of ground. In her geography the states had been presented in color. It is almost a pity to disillusion her. What a beautiful world she must have thought this is! Ohio is pink, Kentucky is green, Virginia is yellow, and so on through the whole gorgeous mosaic of lovely states. There is nothing strange about her notion when we consider the background. An end-

less number of illustrations might be given but they are not needed. It is very plain that the teacher must see to it that every pupil has the right background or else the subject is not actually taught no matter how well the teacher presents it.

When the pupil is thus ready for the lesson the next thing is to present it to him through a class recitation or through reading or through whatever form of teaching is best suited to the subject. This step calls for logical arrangement so that the subject will have both unity and connection. It must be fitted to what has been learned and to what is to be learned. To instruct well is to present useful material in such a way that it will be apperceived and will be most readily available for future needs. The organization of material for purposes of presentation is largely a logical matter and it is determined by the subject to be taught. This falls within the province of special methods. Educational psychology is concerned rather with intellectual growth and the fitting of subject matter to the developing individual. We shall assume that the subject matter for the recitation has been selected and organized, and is ready for presentation.

One of the great difficulties in teaching is that pupils tend to swallow their intellectual doses in insoluble capsules and never really absorb very much. To present a subject clearly is not enough. The third of the formal steps is *association*. An idea which stands alone is useless. The matter learned in any

lesson should be associated with (1) other topics within the same subject, (2) other subjects in the curriculum, (3) experiences which the pupil has had or will have outside of school. When these associations are secured the subject becomes a part of the thought life of the pupil.

In order to make the material available for use whenever it is needed a general notion should be formed. A general notion is one which can be applied to many different cases. It is easier to learn by a particular application, but if the pupil does not extend the knowledge beyond the particular he has a very limited use for it. If he will make it general then he can apply it wherever it fits. There is some danger that the general notion may remain general and never be applied to anything. To prevent this a fifth step is needed.

The fifth step is application. This means simply that a little practice is needed to learn how to apply and to what to apply the knowledge gained. Having applied a given bit of knowledge to several cases the pupil is expected to see that it fits many more cases, and he should form the habit of looking for applications. Likewise in meeting particular situations he should look at once for a general principle which will aid his insight.

These five steps in a lesson require that the thought processes go back and forth from particular to general and from general to particular. This is desirable because it is what we must do in our prac-

tical, everyday thinking if we do effective thinking. Many teachers think that if a subject is once taught to a pupil he will do all of these other things of his own accord. However, such is not the case. If the pupil does not get practice in thinking in the way he will need to think later he will not think that way.

This plan for the preparation and conduct of a recitation requires a well thought out balance of the psychological and logical factors involved in learning. The formal types of teaching frequently provide carefully for the logical structure, and ignore the psychological processes. On the other hand those teachers who are impressed with the necessity of observing the psychological laws sometimes forget the logical organization. It is not enough merely to make connection with the pupil's consciousness. The material must be systematically organized.

In order to prevent the separation in thought of ideas which belong together emphasis has been placed upon the correlation of studies. The followers of Herbart made much more of this than did Herbart himself. The need of providing for the correlation of certain subjects is evident. In our curricula we have separated subjects somewhat arbitrarily. In the world in which we live subjects are not so separated. Geography, history, literature, chemistry, and all of the other subjects commonly taught in school enter into the civilization of the country but not as separate entities. It is only in school that they are separated. To make school more like real

life we should strive to bring them together. Correlations are desirable, but not just for the sake of correlation. It is for the sake of better understanding. Geography has had a great deal to do with history. In fact one cannot understand history without a knowledge of geography. Chemistry also has had a great deal to do with the making of history. One cannot understand history without some knowledge of chemistry. To understand history one should have a very broad, general knowledge of the sciences. A complete account of necessary correlations would require many pages. In this chapter only a suggestion is given. Every teacher should be impressed with the value of correlation, but like every other principle it should be followed with intelligence. Some teachers have thought that everything should be correlated, and hence they have brought together ideas which are such obvious misfits that the procedure has become absurd. A teacher who was trying to correlate mathematics and literature was teaching *The Lady of the Lake*. When the pupils read the line, "The stag at eve had drunk his fill," she asked, "How many feet did the stag have?" Answer, "four." "If he had had twice as many how many would he have had?" Answer, "eight." "If he had to buy shoes at five dollars a pair what would they cost?" Answer, "ten dollars." It is quite possible to teach arithmetic in connection with *The Lady of the Lake* or any other piece of poetry. But in so doing what becomes of the poetry? Correlation must

be reasonable and it must not be handled in such a way that the main objective will be side-tracked. Just how to secure the desired correlation of studies is still a problem. We cannot unite all subjects into one, and if the chemistry teacher teaches history and the history teacher teaches chemistry, and so on through the list there will be a great deal of overlapping. With the increased amount of learning now required there is a tendency for teachers to become very narrow specialists. This makes for lack of proper correlation. The multiplication of courses, and specialization call for increased attention to the problem of correlation, or integration of knowledge. This applies more to college work than to secondary, and efforts are being made at present to improve college teaching along this, as well as other lines. Historically this represents a development of the Herbartian movement.

The aim of organized education is the building of character. Many writers have held this view, but not until Herbart did we have a systematic plan for accomplishing the result. Herbart attempted to show how the moral nature can be developed through education. For centuries it had been believed that the way to teach morals was through precept. But memorizing moral maxims does not have much effect upon conduct. How, then, can instruction determine conduct? This is not an easy question. Philosophers have argued much over questions of determinism and freedom of the will. Ex-

treme determinism, or fatalism, does not offer a workable conception, neither does absolute freedom of the will. It may be possible to elaborate a consistent system of philosophy based upon either of these extremes, but neither explains our daily actions nor fits our feelings. Why do we act as we do? Largely because the ideas of those acts have somehow got into our minds. We do what we think of. There is such a thing as reflex action, but a reflex action is hardly conduct. Our reflexes need comparatively little attention. We *will* what we think. We cannot will what we do not think. If then we can control the organization of thought we can control the will. The child does not have a will to be overcome, he has a mind to be supplied with ideas. When the idea of an act is vividly brought to consciousness the act is likely to follow. Nearly every one has heard of the woman who left her children alone for a little while, and just before leaving them she said, "Now be good children and do not put beans up your noses." Since these children had a very limited stock of ideas, the one idea suggested by the mother would be very prominent in their minds. Left to itself the idea would bring the act. If the idea of obedience had been so fixed in the minds as to make a permanent mind-set it might inhibit the act. At least between the two there would be a struggle for supremacy. If the idea of punishment for disobedience, or the idea of pain resulting from the act were present the act might be in-

hibited. Other factors might be present to influence the result. The actual outcome will be determined by the total, integrated mind-set. Prohibition is only partially effective in preventing acts, inhibition is absolutely certain. Inhibition means that the stock of ideas is so organized that the person cannot will to do an act. I could jump out of the window if I wish to, but my stock of ideas is so organized that I cannot will to do it. Therefore it is perfectly safe to trust me in front of the window. If with reference to every other undesirable act my mind were similarly organized I should be inhibited from doing anything bad. There would be no moral struggle and I should be a saint. Conversely if the stock of ideas were so organized as to suggest the desirable act I should then always will the good, and the good act would follow. Will attitudes are the result of an accumulation of experiences. The cumulative effect of repeated presentations is the important factor in character building. With this principle understood the teacher is ready to perform the greatest part in the moral training of the youth under his care. He will not always be successful because he cannot always control the suggestions and other stimulations. He knows how to build character, but the conditions are not entirely under his control.

To Herbart education means very much more than merely filling the mind. The view of education most widely held, especially by those who have not studied the subject, is that the mind is something to

be filled by some sort of pouring in process, comparable to pouring water into a tank. The only important question is what to put in and how much. Usually it was thought that the greater the quantity the better. This might be called education as erudition, or it might be called the tank theory of education. A slight improvement over this is afforded by the pigeon hole theory of education. This holds that education is a matter of getting information into the mind and arranging it so that any particular part may be found when it is needed. In this association is the important factor. Retention alone is not sufficient. Recall is the result desired. In order to make possible the recall, classification is necessary. Probably a combination of these two views would represent the conceptions of a very great number of teachers yet. The conception that education is the gradual development of an organism is less easy to comprehend, and therefore less popular. However, it has slowly come into prominence and may be regarded as the conception of today. Numerous theories have grown out of Herbart's work and have been emphasized in a greater or less degree by his followers. These have been modified with the advance of educational theories, and they have had a great influence upon the educational thought of the past century.

The culture epoch theory was based upon the biological discovery that the life history of the individual was an abbreviated recapitulation of the life

history of the race. If that is true in the physical development may it not also be true in the mental development? If so, then the mental life of the child should begin where the mental life of the race began and pass through the same stages. The child must go through savagery, barbarism, and the various stages of civilization and is under its influence long before he comes to school. The teacher cannot take him through those stages just with a few lessons given in school.

Along with the emphasis upon the correlation of studies came a new emphasis upon the coördination of studies. By this is meant the balancing of the different fields of study. A common division of the curriculum was into the science group, the language group and the philosophical group. It was held that to have a well balanced education the student should pursue some studies in each of these fields. The question of relative values was not considered in this connection.

Following the idea of the unity of the self a principle of teaching expressed by the term concentration of studies was elaborated. This was somewhat similar to the correlation of studies. The difference being that in the correlation of studies the subjects are taught separately but interrelated. In the concentration plan a central theme is sought and the attempt is made to bring around this theme all of the body of knowledge which belongs in the curriculum. It was held that this procedure would re-

sult in greater unity and would make the knowledge gained more readily available.

While we do not now accept everything Herbart said we must give him credit for having more influence than any one else in bringing about the trend toward the scientific study of education during the latter part of the nineteenth and this far during the twentieth centuries. He has had many followers in America as well as in Europe, and many of his views are accepted today under a different phraseology.

CHAPTER XXIII

HERBERT SPENCER

PRESIDENT GLENN FRANK has said that teachers should be "prophets of a living future instead of merchants of a dead past." Such, indeed, was Herbert Spencer. Many of his ideas which were advanced, progressive, and almost radical in the middle of the nineteenth century have been adopted to such an extent that they seem commonplace now. Spencer's four essays on *Education*—(1) What Knowledge is of Most Worth?; (2) Intellectual Education; (3) Moral Education; (4) Physical Education—should be read for the prophetic utterances. The first of these is, perhaps, the most brilliant essay on education which has ever been written. His style is lucid and entertaining and his discourse argumentative.

It is not easy to say what writers influenced Spencer most, because he was a man who did his own thinking. He was impressed by Rousseau and Pestalozzi, and he seems to have been familiar with Bacon, Comenius and Locke. The scientific discoveries of the period formed the main background for his thought. The psychological group of writers who had been leaders of educational thought during the

period just before Spencer's had given their attention mainly to methods of teaching and to the capacities and traits of children. Some attention had been given to the curriculum, but it occupied second place. Spencer's interest was primarily in the curriculum, and secondarily in child nature.

Educational values had been discussed, more or less, in every century and by nearly every writer on education, but standards of determining values had been but loosely conceived. Arguments were often tautological. Nature is valuable because it is natural; the classical studies are valuable because they are classical, scientific studies are valuable because they are scientific; and religious subjects are valuable because they are religious. Relative values had been mentioned sometimes, but not having a common standard of measurement little was gained by the discussion. After careful consideration Spencer concludes that the function of education is to "prepare us for complete living." "Not how to live in the mere material sense only, but in the widest sense." The question, then, is what studies will help us to live more completely.

Spencer begins his essay by calling attention to the recognized fact that in dress ornamentation receives more consideration than use. He proceeds then to show that the same rule holds with mental acquisitions—the ornamental comes before the useful. "Men dress their children's minds as they do their bodies, in the prevailing fashion." The worth

of various subjects of study had been discussed, but not the relative worth. It is not enough to prove that a subject has value. The question of importance should be, is it worth more than any other subject which could be studied with the same amount of time and effort. Is the student's time being used to the best advantage? The time for education is short in proportion to the amount of useful knowledge there is to be gained. Spencer quotes a stanza of poetry as follows:

Could man be secure
That his days would endure
As of old for a thousand long years,
What things might he know,
What deeds might he do,
And all without hurry or care.

But since our lives are short, "before devoting years to some subject which fashion or fancy suggests, it is surely wise to weigh with great care the worth of the results, as compared with the worth of various alternative results which the same years might bring if otherwise applied." This was a new idea in Spencer's day. It is not so new now. The principles of curriculum construction now accepted by those who are making a scientific study of the problem are those first stated by Spencer, but developed somewhat to meet the conditions of the present day.

In order to evaluate the subjects of the curriculum it will be necessary to classify our needs in the order of importance, and then build the curriculum

to meet those needs. What are the kinds of activities which make human life possible and as nearly complete as we know how to make it? In answering the question Spencer classifies the activities into five groups, as follows: "(1) Those activities which directly minister to self-preservation; (2) Those activities which, by securing the necessities of life, indirectly minister to self-preservation; (3) Those activities which have for their end the rearing and discipline of offspring; (4) Those activities which are involved in the maintenance of proper social and political relations; (5) Those miscellaneous activities which make up the leisure part of life, devoted to the gratification of the tastes and feelings."

The first group of activities has increased in complexity since Spencer wrote his book. Instinct leads every animal to try to escape from conspicuous dangers. Wild animals, great storms, strange and loud sounds, and many other startling features of the environment have been objects of terror to human beings. The amount of knowledge needed in order to escape such dangers is not very great. For a long time man thought that he had acquired "dominion over every living thing that moveth upon the earth," because he had conquered the animals which he could see. But, during the past few decades he has, by means of the microscope and other kinds of apparatus, discovered many varieties of living creatures too small to see with the naked eye, but very dangerous to human life. To protect oneself from

these requires a great amount of knowledge. Spencer recognized the field of study and realized the importance of it but not the extent of it. He saw the necessity of observing rules of health and of forming habits of life which promote health. This is so commonly recognized now that it is difficult to understand how little attention was paid to it a century ago. By the majority of people physiology was regarded as not a proper subject to be taught in the public schools.

The second group included all forms of production and distribution of useful materials. From the beginning of civilization men have considered this, but they did not think it belonged in school. Spencer's explanation of this fact is that in school the ornamental is placed above the necessary. During the last half century great changes have taken place in the attitude toward industrial matters, but still there are many who feel that the study of productive and extractive industries is less noble than the study of the superstitions of people far removed in time and space. While Spencer looked upon the past with censure he looked to the future with hope. His predictions have for the most part come true. The following lines will serve as one example: "Just as fast as productive processes become more scientific, which competition will inevitably make them do; and just as fast as joint stock undertakings spread, which they certainly will; so fast will scientific knowledge

grow necessary to every one." This has come about on a far larger scale than Spencer could possibly have dreamed. Scientific studies have become respectable as well as practical.

The neglect of the third group of activities, those having to do with the rearing of children, is not easy to explain. Spencer calls it an astonishing fact, and remarks that the curriculum as we have it seems to have been planned for celibates. He presents an argument to show the need of training in this field. He concludes: "Thus we see that for regulating the third great division of human activities a knowledge of the laws of life is the one thing needful. Some acquaintance with the first principles of physiology and the elementary truths of psychology is indispensable for the right bringing up of children. We doubt not that this assertion will by many be read with a smile." Since that statement was written a little progress has been made. We have passed the stage when it was necessary to argue about the value of such knowledge. We have accepted the arguments, but we have included in our curricula only a rather small part of the subject matter necessary for adequate training for the responsibilities involved. However, what Spencer did not realize, and many today do not think of, is that the great difficulty is not to get the subjects into the curriculum, but to get people to do what they have been taught. It is one thing to give lessons in physiology, dietetics,

sanitation, and hygiene, and it is quite another to train humanity in general to apply the knowledge gained.

Concerning the fourth division—the training for citizenship through the study of the social sciences—great progress has been made since the day of Spencer. At that time history was the only social science which received sufficient consideration to make it worthy of note. It is commonly thought that Spencer was opposed to the teaching of history, because he made some severe criticisms of it. This is not correct. He was bitterly opposed to history as it was then taught, but very much in favor of it as it might be taught. The most approved history teaching of today is not so very far from Spencer's conception of what it should be. He says, "The historic information commonly given is almost valueless for purposes of guidance. Scarcely any of the facts set down in our school histories give any clue to the right principles of political action. Familiarity with court intrigues, plots, usurpations, or the like, and with all the personalities accompanying them, aids very little in elucidating the principles on which national welfare depends. . . . Supposing even that you had diligently read, not only *The Fifteen Decisive Battles of the World*, but accounts of all other battles that historians mention, how much more judicious would your vote be at the next election?" Until very recently a great part of the history taught consisted of descriptions of battles, and of petty gossip about

people in prominent places. Some of the books on the market today are just as bad, if not worse, but they are used very little in school. If Spencer were living today no doubt he would vigorously attack these books. He wished the historian to give "all facts which help us to understand how a nation has grown and organized itself." Among the topics which he would have included are the following: the industrial system, how trades were regulated, connection between employers and employees, distribution of commodities, means of communication, the medium of circulation, industrial arts, æsthetic culture, architecture, painting, poetry, sketches of the daily lives of the people, morals, laws, etc. All of this is to furnish materials for the study of comparative sociology. But he says, "without an acquaintance with the general truths of biology and psychology rational interpretation of social phenomena is impossible." These topics would afford abundant material for history courses, but the courses would be very different from those taught in the nineteenth century. The history teaching of today is approaching the ideal set forth by Spencer, but unfortunately some books and some teachers are still a long way behind.

Lastly we come to that part of life which we all enjoy—the leisure part. Should education contribute to this? If "complete living" is the goal then enduring pleasures, unalloyed with pain or evil should be included in the program. "Without painting,

sculpture, music, poetry, and the emotions produced by natural beauty of every kind life would lose its charm." There is a certain amount of assumption in this statement. That the school should encourage the nobler pleasures and cultivated tastes is accepted. It is presumed that the subjects just mentioned will contribute to this. Some modification may be necessary to meet the tastes or conveniences of a particular individual, but until we find something which will give more enduring pleasure to human beings it is reasonable to accept this list. There is no argument about these subjects. Spencer wishes only to point out that they are dependent upon the knowledge of science. Science makes possible the production of works of art, and the knowledge of science enables us to appreciate many things which without it would go unnoticed. What knowledge then is of most worth? The answer of Spencer is *Science*.

In the essay on Intellectual Education the conditions determining the principles of intellectual education are discussed. The basic principle which gives us the key to the understanding of a system of education is this: There is a definite relationship between the system of education and the social state. During a period in which creeds and interpretations are given by authority the teaching of children will be dogmatic. Under a political despotism ruling by force we may expect to find an academic discipline upheld by the rod. Under political liberty we may

expect educational freedom. During an ascetic period when self denial is regarded as a virtue then the school will be chiefly concerned with thwarting the desires of children. When happiness is regarded as a proper aim then efforts may be made to gratify the wishes of children. Even industrial conditions show certain parallels with educational procedure. Along with the idea that industrial conditions may be controlled by law goes the idea that the development of the child may be controlled by the teacher. Along with the idea of self-regulation in business goes the idea of the natural growth in the child. Intellectual progress seems of necessity to pass through three causally related stages: "(1) the unanimity of the ignorant; (2) the disagreement of the inquiring; (3) the unanimity of the wise." We seem to be still in the second stage. In certain respects we may be approaching the third stage.

The remainder of the essay contains much that was prophetic at the time it was written but it is for the most part commonplace today. Some of his prophecies have been but partly fulfilled. For example he speaks of "that intensely stupid custom, the teaching of grammar to children, . . . as grammar was made after language, so ought it to be taught after language."

In his essay on Moral Education Spencer treats in a very broad way the problem of making humanity better. He says, "Strangely enough, the most glaring defect in our programs of education is en-

tirely overlooked." The position which nearly every one will ultimately fill is that of parenthood, and with that goes the responsibility of training children. Upon the success depends the welfare and the moral condition of the race. It follows then that "no rational plea can be put forward for leaving the Art of Education out of our curriculum." This will affect not only the children but their remote descendants. "The subject which involves all other subjects, and therefore the subject in which the education of every one should culminate, is The Theory and Practice of Education."

A statement which was new in Spencer's day, but admitted now, though too little realized is that the perversity and bad conduct of children is largely due to the ignorance and misconduct of parents. The moral development (Spencer does not talk of regeneration) of the race must be brought about through the proper training of children. This is a perfectly sound idea but the difficulty is to get started on the right course. If we could have a generation of parents whose conduct was above reproach, and whose knowledge of child nature was adequate to fit them for parenthood the moral problem would be solved. But so long as children must grow up with many of the faults of their parents progress will be very slow.

Another principle enunciated by Spencer which is more accepted than practiced today is that arbitrarily imposed rules of conduct do not build char-

acter. Actual building comes through the application of the law of cause and effect—that is the law of nature. Punishment by natural consequences holds through adult life as well as through childhood. This does not mean that society shall not punish offenders, nor that the school shall not use punishments, but the teacher should be an interpreter of nature rather than merely an autocrat of his own will. For example, if a child scatters his playthings around and thus makes disorder the natural consequence is for him to pick them up, rather than to listen to a scolding while some one else picks them up. The element of justice is readily recognized by the child, and the experience is therefore educative. This principle is generally accepted today, but not generally applied.

The value of physical education is now emphasized by nearly every educator, but only a half century ago the slogan, "Brains not brawn" was used in many colleges, and in the lower schools no attention whatever was paid to physical training. Spencer's treatment of physical education was far ahead of his own time, but since health, diet, exercise, and everything that promotes physical welfare receive so much attention today it is not necessary to review the essay on that subject. It may be interesting to note that there was occasion for a vigorous argument in favor of allowing girls to take exercise out of doors. It may be encouraging to the student of today to read the prescribed daily rou-

tine for college students, quoted by Spencer with disapproval:

6 o'clock students are called

7 to 8 studies

8 to 9 scripture reading, prayers, and breakfast

9 to 12 studies

12 to 1: 15 leisure

1: 15 to 2 dinner

2 to 5 studies

5 to 6 tea and relaxation

6 to 8: 30 studies

8: 30 to 9: 30 private studies preparing lessons for next day

10 to bed

If any one had suggested student activities, sports, parties, etc., such as students engage in today what would have happened to him? It took some courage even to say what Spencer said. He lived to see great changes in all of the fields of education which he discussed, but the change of attitude toward physical education was the greatest. His influence in bringing about the changes was very great. He lived to be eighty-three years old and never expressed a longing for the good old times when he was young. Writers before Spencer had tried to relate education to the needs of the times in which they wrote, but Spencer saw further ahead of his time than did others, he spoke more clearly and forcefully, and he spoke at a time when the world was beginning to *feel* the new demands made by the new conditions. The time was ripe for some one to say what Spencer

said. He believed not only in vocational training but also in complete training for the job of living.

Spencer was not alone in emphasizing the value of science. Many others were speaking along the same line. The most distinguished of his co-workers was Thomas H. Huxley. So far as his ideas on education are concerned he was, perhaps, less original than Spencer, but during his own life he had greater influence. He was a member of the London School Board, and he exerted a great influence on the work of the schools of England. His position enabled him to get an immediate hearing, and to get some of his views put into practice. He was a vigorous writer and speaker and a severe critic of the prevailing practices. His main effort was given to getting science into the public school curriculum. He was also a strong advocate of teaching the Bible in the schools, but he did not approve of teaching denominational doctrines. Like Spencer he believed in teaching what people need to know. In describing the typical school he says, "There you shall toil, or be supposed to toil; but there you shall not learn one single thing of all those you will want to know directly you leave school and enter upon the practical business of life."

No doubt the future historians will characterize the nineteenth century as the century of scientific development. It is probable that there will be many more scientific discoveries made during the twentieth century, but it was during the nineteenth that

people changed their attitude toward science. At the beginning of that century there was little interest in science, and a great amount of disapproval of the study of it. By the end of the century interest in it was almost universal, people were eagerly watching for more discoveries, and science was everywhere taught in the public schools. Of course the inventions and discoveries of scientists were chiefly responsible for the change of attitude, but in order to ensure progress it is necessary to reach people with ideas as well as with inventions. In this service Spencer and Huxley were the leaders.

CHAPTER XXIV

THE TWENTIETH CENTURY'S HERITAGE

THE twentieth century's heritage was rich, not in completed principles and practice, but in partially developed ideas and fertile suggestions. Of great value and significance was the presentation of unsolved problems. The educational leaders of previous centuries had discussed many varieties of problems, but for the most part the general public had been afflicted with an unswerving complacency which was not conducive to progress. Parents had expected, and often demanded, that their children be taught as they themselves had been taught. There was nothing sacred about the curriculum but people just accepted it as a matter of course. Certain things needed to be known because they were usually taught in the schools. That was reason enough. The intellectual world moves slowly, but it moves, and it moves most rapidly when stimulated by doubts. Spencer had presented vigorously the question of what needs to be known. He answered his own question, and his answer was worthy, but the presentation of the problem in a clear and emphatic way contributed more to progress than

did his answer. The demand for an education which functions in daily life stimulated progressive thinking.

The eighteenth century had been a century of struggle for freedom—especially noticeable in France and America—but this meant freedom for adults, and for the most part male adults. The concept of freedom was very slow in getting into the schools. Rousseau had voiced it, and his voice was heard, but not heeded. Rousseau himself did not apply his theories to women. Freedom in the abstract was the cry, but it was not applied to the school, to the church, nor to the home. It was not even thought of in terms of universal application. Nevertheless, the cry was raised and it reverberated with increasing vigor. In the nineteenth century it began to be applied to women and children. There are among us still many who think that women and children have been given too much freedom. Whether that claim is valid or not, the twentieth century received as part of its heritage a freedom of thought, customs, beliefs, and conduct which furnishes a basis for the whole social and intellectual structure of present-day civilization. This freedom must be one of the determining factors of modern education. Many of the old social controls are gone. It is useless to lament their loss. They are gone, and education must supply something to take their place, or admit the claim of a few extremists who hold that a lawless world will best satisfy human needs. The

twentieth century has not only a problem but a heavy responsibility. For many centuries the church was the chief agency of control, but it has lost much of its influence on account of its insistence upon static doctrines and its unwillingness to adapt itself to changing conditions. The school, in most countries, cannot teach religion, but it must provide moral guidance and a character building program to fit the conditions under which we live. In America and in Europe there are numerous special agencies whose purpose is to coöperate with the school in working out such a program. These organizations are helpful but the school itself must bear the main burden.

A fundamental viewpoint of educational philosophy which is not new, but which receives new emphasis, is found in the relation of the school to society and to the state. It is now generally felt that education is a development of society as well as of the individual. A name rarely mentioned in educational history is that of Baron Friedrich von Rochow, a German nobleman who lived from 1734 to 1805. He wrote much upon the subject of education and he established several schools. He was a very practical man and he did much for the people of his time, and he contributed and put into practice one idea of world-wide significance. He owned large estates, and he studied the condition of the people dependent upon him. He worked out a system of education for their betterment. He had in mind also

the strengthening of his country—Germany. In 1779 he wrote a book on *The Improvement of National Character through the Public Schools*. The German word which is here translated “Public Schools” was Volksschulen. The term “public schools” is not a perfect translation of the word Volksschulen. These schools were schools for the common people, i. e. the laboring class. Germany had a more strongly marked caste in its society than is found in the United States. Other schools cared for the middle and higher classes. Von Rochow held that “children belong to the state” and he wished to train the people to be efficient and loyal. This would improve their condition as well as help the state. That education could be used as a means of developing a national character and strengthening the state was a new idea, just then rapidly taking hold of the German mind. It was held by Frederick the Great, in whose reign von Rochow wrote the book mentioned above, and by many of the political leaders of Germany. There are two phases of this idea. First, that the way to build a state out of the people is for the state to control education and thus form the type of citizens desired. Second, that education is the means of building character. The former interested the political leaders, and the latter has appealed more strongly to educational leaders especially since the time of Herbart. Both phases of this educational program were studiously developed by Germany, and both have been recog-

nized very generally in other countries since that time. It was by means of such an education that Germany developed her citizens. If Germany had continued the conquest of the world through industrial and scientific advancement instead of through war her power in the world would have been enormous, and perhaps almost supreme. Its education was efficient, but the goal and the means adopted to attain it were anti-social. Germany's philosophy of education failed to reckon with all of the factors which must enter into a successful program.

Another large idea delivered to the twentieth century is that of evolution. This has permeated all of our thinking and is the basis of all modern educational theory. The principle of evolution was the greatest intellectual contribution of the nineteenth century. It is so familiar that little space need be given to it here. It has given a new meaning to education. Not only biology, but also sociology, psychology, philosophy, religion, and political science have been studied from the standpoint of evolution. Two somewhat opposing tendencies have marked the thinking in these fields. The more conspicuous tendency has been to differentiate fields of thought into separate subjects. This has resulted in narrow specialization. The other tendency is to seek a unifying idea by means of which all phenomena pertaining to living things can be explained. This unifying idea is evolution.

In considering the factors in our heritage which

the twentieth century is building into a philosophy of education it is convenient to speak of the biological, psychological, and sociological fields as if they were separate subjects. It should be kept in mind, however, that this separation is largely arbitrary. Biology figures conspicuously in psychology and in sociology. We have genetic psychology and social psychology. The sociologist may well say that our interest in biology and psychology is due to their social significance. In short each field may correctly maintain that the other two are subordinate to it, and economics often maintains that all are subordinate to it. Those points which are pressing for immediate consideration the reader may classify in any way he likes and the writer will have no quarrel with him.

Only in comparatively recent times did it become known that the brain is intimately connected with our mental life. It is a twentieth-century problem to discover the significance of this fact. It means a great deal not only to psychology but also to sociology, education and even religion. Part of its significance we have thought out, and part no doubt remains unnoticed. We have noted that it means that the character of the individual is permanently modified by whatever experience he has. Everything which goes on in the consciousness is permanent because of its effect upon the brain. There is no such thing as undoing. You cannot ungo where you went nor unthink what you have thought. In nature we find

eternal law but not forgiveness, and this applies to the mental world since it is conditioned upon the physical. The lesson for life and for education is impressive.

Closely connected with the discovery that the brain is the center for consciousness was the observation that as we ascend in the scale of creation we find a gradually increasing cerebrum. What of it? It means a greater variety of reactions, deliberation, choice, judgment, and all that goes with educability. The being with a high degree of educability must be educated or perish. It is no longer a question of adjusting the individual to his environment, it is a matter of adjusting the environment to the individual. Instead of eating whatever the environment happens to offer he produces what he wishes; if the weather gets cold he does not depend on raising a coat of fur, he builds a fire. In short the whole world of human interests has come from the increased cerebrum which gave educability and made education imperative.

John Fiske has called attention to the significance of the prolonged period of infancy in human beings compared to that of animals. This fact is connected with educability. The human infant has a wide range of adaptability but he is not adapted to his environment. He is helpless and dependent upon his parents in order to survive. From this helplessness comes the family, with all of its interests, social, political and economic. It has resulted in permanent

attachments between parent and child and between brothers and sisters. No animal mother cares for her offspring after the period of dependence has passed. The phrase "a little child shall lead them" takes on a new meaning; for the little child has led the race into its present form of civilization. It was the power of weakness that made the human world what it is. The social significance of this fact is too great to comprehend, but it provides a source for fruitful thinking.

By the beginning of the twentieth century psychology was accepted as a natural science. This acceptance provided a point of view and a method of study. The advance in our insight into mental processes since the time of Locke has not been so great as is sometimes thought, but we have a new method of study and we have discovered many new relations. The recognition of the possibility of applying laboratory methods to the study of psychology gave this century an advantage. The development of the genetic concept in the field of psychology brought forth new relationships. The greatest heritage for psychology was the idea that psychology could be applied to the practical activities of life. The challenge which was offered to the century was to find to what phases of life psychology could be applied, and how to make the application. This has been the main objective of psychological study during the past quarter of a century. Much progress has been made and much more is expected.

Sociology as a special subject in the curriculum is quite new, but social problems are not new. They had been discussed for more than two thousand years. The Greek philosophers were good sociologists, and Christianity itself was a sociological movement. Sociology did not need to enter the field of education for it was already in it, but the methods of investigation now applied in sociological studies have made possible more rapid progress, and the concept of evolution applied to social problems has been very enlightening.

These conceptions and many others which might be mentioned formed the basis for a widespread, energetic and scientific study of education. A more elaborate and highly specialized training for teachers was required. It can hardly be said that there were new aims for education but the aims already recognized by the few leading thinkers were made more definite, and were made known to more people. The broadening content of the curriculum made people more ready for further broadening. The increased interest in education and the desire for education on the part of rapidly increasing numbers of people, stimulated by the idea that education is for all of the people, has brought about the multiplication of schools and the appropriation and donation of vast sums of money for education. This gives added opportunity and responsibility. Responsibilities which once belonged to the family and the church are now placed upon the school. Notable illustrations of this

are found in the health program for the schools and the moral training demanded. Emphasizing health as one of the objectives of education means more than merely keeping the individual child well. It concerns the race, both present and future. The protection of a country depends more upon science than upon fortifications. It is the scientist today who stands between us and slow death. Even if it were not an advantage for a particular person to have good health it would be necessary for the nation to adopt a health program if it expected to compete with other nations. The child-centered school of today recognizes the nature and needs of the child, but it recognizes that the child is a part of the race and that the race has an interest in the child. The keynote of this century is *shared interests*. This has been impressed somewhat by the interdependence of various departments of knowledge. The remarkable advances in science have been made possible by combining the knowledge of various departments. This necessitates a broader program for the schools. The quantity and variety of information demanded by the times leaves little room for the old disciplines whose content had little or nothing to do with the activities and problems of the day. This state of affairs presents to the century an important question. Should the newer subjects be taught in a way to preserve the discipline of the abandoned subjects, or will discipline take care of itself if the right subject

matter is given and associated with the right activities and concepts?

Nearly every school from the elementary grades to the graduate school is now more or less of a research institution. This has brought into education new methods and new possibilities. Education no longer consists of a few exercises conducted within the four walls of a spiritually windowless room, it is a means of contact with all that the world knows, feels, wills, and does. Furthermore it is expected to lead the world to greater knowing, feeling, willing, and doing. The school is expected not only to reflect civilization but to lead it.

The above list includes but a part of our heritage, but it is enough to indicate the nature of our job, and to offer a challenge to the young generation to accept this highly developed, complex, and extensive institution as its greatest heritage, and put forth its best efforts to promote its continued evolution.

So far our interest in the development of educational ideas has had little reference to place or country. Now the reader is asked to place himself definitely in the United States, and to follow the trend of our own education. It has been the hope that a general survey of the educational theories of the world would form a good background for the understanding of American theories and institutions.

PART III
AMERICAN EDUCATION

CHAPTER XXV

EARLY AMERICAN EDUCATION

THE social, economic, religious, cultural, industrial and geographic conditions of a people are reflected in the schools. In part the school makes these conditions, and thus there is a constant interchange of influences. In order to understand the American school of the colonial period it will be necessary to recall some of the forces which were operative in the life of the early settlers. The New England colonies had to contend with severe winters, rather unproductive soil, hostile Indians, and small settlements far apart. They had little to do with and what they did have was hard to get. It was very difficult to establish schools. In the south—Virginia for example—the climatic conditions were much more favorable. It was easier to raise crops, easier to travel, and in every way easier to live. They had as little as their northern friends, but less with which to contend.

The meager equipment, poor housing, poor salaries for teachers and small number of pupils were due to the economic conditions and the small population. The content of the curriculum, the methods of teaching and of discipline, the spirit of the school-

room, and the attitude of the people toward the school were due to the type of people who settled the country. The New Englanders were austere, rigid, and strict in their religion to such an extent that they have given a meaning to the word Puritanical. In the south the people were less severe in their nature and views and took life more easily. These attitudes were reflected in the schools.

The earliest schools in the south were either endowed schools for the poor or private schools for those who were financially able to pay for the education of their children. The value of the school to the community was not fully realized. An illustration of the attitude may be found in the records of the Win-yaw Indigo Society. This society was organized by business men in South Carolina for the purpose of eating and drinking together and discussing economic and other questions of the time, very much in the manner of various luncheon clubs of today. The chief difference being that the common drink of today's luncheon clubs is coffee. In the middle of the eighteenth century it was often something stronger. When this society had accumulated more money than was absolutely necessary for their own affairs their "hearts overflowed with the milk of human kindness" and it was voted that the money on hand be appropriated for the purposes of a charity school. There was a very fine spirit shown in this, but it is to be noted that it was done as a matter of kindness to the needy. It was not a social enterprise for

the sake of building up a community. The movement was more unselfish but less farseeing than it would have been if it had been done for the social and economic improvement of the community.

There was a sweeter spirit manifested in the south than was shown in New England. Private gifts were encouraged and secured for the benefit of the Indians. They expected soon to have the Indians educated into the white man's civilization. William and Mary College was founded after the project had been discussed throughout the greater part of the seventeenth century. During the period before the American Revolution the College was comparatively prosperous and represented the effort of the colonists and their friends to promote "sweetness and light." The educational leaders in Virginia during the eighteenth century were broad-minded for their time, and they had a wide and wholesome influence, but they could not long compete with their energetic neighbors in Massachusetts.

It is stimulating though not altogether comforting to compare the spirit of Virginia with that of Massachusetts. Some recent writer in describing a character in a story said that she had an air which seemed to say "here stands Massachusetts." There are still thousands of fine ladies, and fine men too, who might be described that way. Massachusetts has produced far more than its share of brilliant and delightful people, but no one would think of mentioning sweetness as a characteristic of any of its

institutions. It would be comforting to think that the William and Mary spirit was conducive to rapid progress, but it does not seem to have proven so. The early settlers of Virginia were a fine type, and the social atmosphere, as well as the geographic, was sunny. If one were to match the phrase quoted above he would say, "Here *sits* Virginia, proud and contented." A line from a popular song runs, "Nowhere the sun shines so bright as in Virginia." Compare the following line describing Massachusetts, "A chill no coat, however stout, of homespun stuff could quite keep out." Virginia welcomed the white man with sunny and even slopes and easily tillable lands, Massachusetts presented a bleak and barren shore, apparently made as a buffer for storms, and back of this, rocky fields, inviting only to the hardy and tireless worker.

In a previous chapter it has been mentioned that the word school originally meant a place to spend leisure. However, that connotation was lost long before New England was settled. There was not then nor has there ever been anything in New England educational principles to suggest leisure. Perhaps firmness of purpose and narrowness of view belong together. At least they went together, and American education has been very much under the influence of our early austere religion. This was partly a matter of habit and tradition. Nearly everywhere in Europe the church was either directly or indirectly in control of education. The purpose of edu-

cation was largely to give to the children what they regarded as a proper religious training.

Habit is more potent than doctrine. The early settlers came to this country with two doctrines which they continually preached but did not practice. They maintained that all men are created equal, but in their feelings and in their relations they recognized a caste as objectionable as that which they had been accustomed to in England. They came here in search of religious and intellectual freedom but their old habits of thought prevented them from granting freedom. It was impossible for them to practice what they preached, but on the other hand it is a very good thing that they did not preach what they practiced. It is common for ideas to get into practice very slowly. It takes a few generations to change a custom. The caste feeling was shown in the schools. Pupils were classed according to the standing of the parents. Even in Harvard and some of the other colleges students were classified and to some extent graded according to the social and financial standing of the family from which they came. The same distinction was made in the seating of members in church. In short, they left the aristocrats of Europe so that they might be the aristocrats in America. The laws they framed were democratic but the people themselves were not. New Englanders even lacked the coöperative spirit which later led to the rapid development of the west. Travel was difficult and that made coöperation inconvenient, but the peo-

ple themselves were not temperamentally adapted to it nor were they trained to it. A man who had lived from childhood to middle age in Vermont once said to the writer, "If there were three Vermonters, and one of them had a lemon and another had some sugar and the third had some water none of them would have any lemonade." There are no finer people in the world than the stable old Vermonters, but not until very recently did they develop a spirit of coöperation. We must look then for a strong individualism in this country until civilization had moved as far west as the Mississippi Valley. However, this individualism must not be confused with selfishness. Generosity and philanthropy were conspicuous. More will be said about this later.

Massachusetts took the lead in education and maintained it undisputed until the present century. Perhaps she holds it yet, but that is a matter concerning which there is difference of opinion. Massachusetts had small physical resources. There was not enough mining nor lumbering, nor agriculture, nor stock raising to yield more than scant local needs. Having no other profitable industry Massachusetts began to raise men. No other state in the Union can compare with her in the number of distinguished men produced. The biographies of the men of Massachusetts would almost be the history of the United States. Whether this has been due to the stimulating climate, the rigorous discipline, the

firmness of purpose, the hard work required, the austere religion, their native intellectual endowments, or to the fact that among them were a good number of leaders who had been well educated in Europe it is not possible at this time to say. Whatever may be the reason, the Bay State has shown us that it is not soil nor climate, but *men* that make wealth. It has been said that the water power made the industrial development of New England. Of course they used the water power, but Alabama and many other states had an abundance of water power but they did not begin to use it until they had the men. Verily, if a state would be wealthy let it begin by producing highly trained men.

The influence of Massachusetts was due not so much to her industrial and financial development as to the ideas which her statesmen and writers spread over the nation. Lincoln in his Gettysburg address said, "The world will little note nor long remember what we say here, but it can never forget what they did here." When Lincoln said that he did not know he was making one of the greatest speeches ever made, and he underestimated the results of effective speech. The words help men to remember deeds more than deeds help them to remember words. Many of the historic acts recorded have become famous because of the interpretation placed upon them by some brilliant writer. A very small engagement between a few men, by the little wooden bridge over

a little stream called a river, flowing through Concord, has become famous because of the significance a poet gave to it when he wrote:

Here once the embattled farmers stood
And fired the shot heard round the world.

It should also be said that here once a discerning poet stood and wrote the lines read round the world. The men of Massachusetts built factories and they also wrote what the rest of the country read.

Until the latter part of the nineteenth century American educators were organizers rather than theorists. Even Horace Mann, who was one of the most distinguished of American educators, was an organizer and promoter and not a theorist. Some of our college men combined a certain amount of educational theory with their philosophy, but with them the philosophy was first. William T. Harris might be regarded as an educational philosopher, but his theories were mainly developments of doctrines produced in Europe—especially in Germany. During the last two decades of the nineteenth century Dr. G. Stanley Hall and a few others began to investigate and to produce “home grown” educational theories. Stimulated by these endeavors the present century is producing a large amount of educational principles and more than ever is getting these principles put to use by the classroom teachers.

It is not very difficult to describe the curriculum

of the early schools. For the beginner the entire program was to be found in the horn-book. This was not a book but it has been called that, and it was all the pupil had. It was simply a paddle made of thin board on which was fastened a sheet of paper containing the alphabet and the Lord's Prayer, or perhaps some other bit of useful knowledge. Over the paper was tacked a thin sheet of horn or other transparent substance to keep the paper clean and to keep it from wearing out. It took a long time to master the alphabet and therefore this paddle would serve as the sole equipment for the child for several weeks or even months. There was no thought of a graded series of lessons.

The *New England Primer* was a book of universal knowledge for young children. If the reader has access to Clifton Johnson's *Old Time Schools and School Books* many interesting illustrations may be found. The material in the primer must have made a queer impression upon the child, because, in order to get any meaning out of it, it is necessary to know Christian theology, Bible history, and much other general information possessed only by adults. It was supposed to be adapted to children because it was written in rhymed couplets with more or less catchy sounds. These jingles were arranged alphabetically, and in that respect they were fitted to his previous training. A few examples will show the type.

In Adam's fall We sinned all.	Thy life to mend God's book attend.	As runs the glass Our life doth pass.
Young Obadías, David, Josías, All were pious.	Xerxes did die And so must I.	Zaccheus he Did climb the tree Our Lord to see.

Moral and religious truths were presented in what was supposed to be a very impressive manner. Crude pictures were used very freely. A picture of John Rogers being burned at the stake while his wife and children looked on was supposed to teach the comfort and assurance of Christian faith. The entire book is given up to making vivid the terrors of hell, the blessings of heaven, and the shortness and uncertainty of life on earth.

Our days begin with trouble here,
Our life is but a span;
And cruel death is always near,
So frail a thing is man.

Accompanying a picture of the earth burning up while Christ in a cloud looks on are the following lines:

The earth must burn
And Christ return;
What then will hide
The sons of pride?

The following extract from one of the catechisms is typical of the content:

What will be your condition in hell?

I shall be dreadfully tormented.

What company will be there?

Legions of devils, and multitudes of sinners of the human race.

Will company afford me any comfort in hell?

It will not, but will probably increase my woes.

If you should go to hell how long must you continue there?

For ever and ever.

The spellers, too, were full of advice and warning. Spelling books did not consist of mere lists of words, but they were made up of sentences—some profound, some silly, some matter-of-fact. The following are examples:

The man can put on his wig.

The rainbow is a token that the world will not be drowned again.

It is every man's duty to bequeath to his children a rich inheritance of pious precepts.

Large bushy whiskers require a good deal of nursing and training.

The naughty boy who steals the pears is whipt as well as he who swears.

Arithmetic was not given so much attention as is commonly supposed. In some schools it was not taught. What was given was regarded as very practical. Some items from the table of contents of one

of the arithmetics will indicate the nature of the lessons.

Barter.

Alligation Medial.

To find the time of the moon's southing.

To find the year of indication.

The proportions and tonnage of Noah's Ark.

Many of the problems were in the nature of puzzles so far as form of statement is concerned, but they could be solved by arithmetic. Some were stated in the form of poetry, and many were everyday problems such as would be used today. A single example may be of interest,

If the posterity of Noah, which consisted of six persons at the flood, increased so as to double their number in 20 years, how many inhabitants were in the world 2 years before the death of Shem, who lived 502 years after the flood? Ans. 201,326,586.

The grammar schools fulfilled a function somewhat comparable to the high schools of today. They were intended mainly to prepare pupils for college. The term has no relation to what we now call the grammar grades of the elementary school. In order to enter the grammar school pupils must know how to read. In these schools Latin was the most important subject. This subject was regarded as important because so much of religious literature was written in Latin. The "holy languages" were Latin,

Greek, and Hebrew. How many pupils used Latin for this purpose it is impossible to say. Aside from preparing for college the purpose of the school was to teach pupils "good literature and sound doctrine." The training was for public service in the church or in the state. For this they should be able to read and understand the Bible and the laws. The legislation in regard to the establishment or conduct of schools usually related to instruction in the Christian religion and the promotion of piety. A few persons even opposed the teaching of spelling because it might detract from religion. In a few places arithmetic was excluded.

It is commonly believed that the fundamentals of the early schools were the three Rs (readin' and 'ritin' and 'rithmetic).

Readin' and 'ritin' and 'rithmetic
Taught to the tune of a hickory stick

has the characteristic jingle, but it does not give correct information. Readin' and 'ritin' and religion were the fundamentals. These were followed closely by Latin. The method of learning might be stated also as three Rs. The pupils were expected to receive, retain, return what they were taught and that was all that was expected of them. A few other subjects were taught also. Among these were French, geography, navigation, applied arts, and sometimes military training.

The methods of teaching were simple and direct

though very inefficient. No one thought of anything but pure memory work, but the memory was aided by rhyme and meter. It was aided also by physical appliances cut from the branches of trees and applied vigorously and almost daily. The whipping post was the center of the most impressive school activities. These activities were not extra-curricular either, they were intimately associated with class work. Some sweet spirited teachers offered positive rewards as an inducement to study in place of the negative drive of the gad. For example, pupils who had learned their lessons unusually well would be allowed to read two chapters in the Bible. This might not offer a strong inducement to the average pupil today, but there is some merit in it. At least it suggests that it is a privilege and a pleasure to read the Bible. That is better than requiring pupils to stay after school and read the Bible for punishment. A fable or other form of story was the favorite way of teaching a moral lesson. Following the story the lesson which it taught was stated in the form of a precept or admonition. There was little of dramatic cleverness and subtlety in these stories. They were crudely and bluntly prepared solely for the purpose of teaching a lesson, and there was little of interest in them. However, as compared with the rest of the matter taught they must have been entertaining. Nemesis was the obvious principle. Rewards and punishments are immediate and magnified. Death and hell come quickly to the sinner, and earthly joys

and heavenly hopes come readily to the good little boy. Reading lessons were conducted in a very mechanical way. Pupils were expected to read rapidly in a loud voice and "mind their stops." The last phrase refers to pauses at punctuation marks. The rule was to pause long enough to count one at a comma, long enough to count two at a semicolon, long enough to count three at a colon, and long enough to count four at a period. If the teacher had an ear which was not too sensitive and knew when to caution "mind your stops" he could be a successful teacher of reading.

If there had been a national education association in existence at that time the meetings would have been highly amusing if a representative body of teachers attended. The group would have been as heterogeneous as humanity itself. Some of the teachers were ministers who put in part time teaching, others were doctors who taught school or teachers who practiced medicine as a side line, some were degraded members of society who happened to know how to read and write. Some of these latter were persons who had been deported from Europe as undesirable citizens. Married women or widows frequently gathered children into their homes and taught them the elementary work. In addition to all of these there were some men who looked upon teaching as a life work with noble purpose. These had a great influence over their pupils and over the community in which they lived. Few men had greater

influence in Boston than had Ezekiel Cheever, who was for many years principal of the Boston Latin School. He had been educated in England and was a scholarly man, especially in Latin. His life was spent in teaching, and he lived to be ninety-four years old. Cotton Mather in a tribute to him said:

And yet so well our work adjusted lay
We came to work as if we came to play.

His work was planned in a way to help the pupil to understand. This was enough to make him distinguished in his day. It should be added that true to his Puritan environment he was not lax in the use of punishment. His salary was \$300 a year. This was a very high salary for a public school teacher.

Teachers' salaries were very low—usually between \$100 and \$150 a year, and frequently part of that was paid in produce. Even though the qualifications for teachers were scarcely more than the ability to read and write there were not enough persons who were willing to teach. Perhaps the low salaries had something to do with this and perhaps the lack of esteem in which teachers were held made the calling little attractive. The case of Ezekiel Cheever seems to indicate that the lack of esteem was due to the lack of desert on the part of the teachers. It is to be noted also that the high esteem in which Mr. Cheever was held did not bring him a salary commensurate with his work or his influence.

In the majority of schools the number of pupils

was small, but if the district were large there might be a large number of pupils under one teacher. There was no system about the size and organization. In some places more than two hundred pupils were under one teacher. The buildings likewise had no standard of construction. They were uniformly poor but there was no other uniformity. Slab benches served as seats and sometimes there was a shelf or table to serve as desk and sometimes there was nothing but the rough slab.

The first schools were supported by private subscription and by tuition, but as the towns grew in size they began to make appropriations from taxes to support schools. Lands were often given for school purposes by private individuals and by government grants. In some states the law required towns to maintain public schools. Laws requiring parents to teach their children to read were common. This amount of education could be given at home or in a public or private school. This law was not very effectively enforced but it encouraged education and was of real value. Public schools were under the control of the selectmen of the town much as the schools now are controlled by the school boards. The chief duty of the selectmen was to hire a teacher, provide a building and appropriate money to support the school. There was one additional duty not exercised now, that was to visit the schools and see if the work was being well done. Commonly a special committee was appointed to visit the school. The

chief thing they did was to examine the pupils and see if they had learned the catechism. In case of private schools the only thing the selectmen did was to approve applications of persons who wished to open schools. A knowledge of reading and writing and the fear of the Lord were the usual requirements. The most common type of private school was that known as the Dame School. This was a primary school taught by a woman, usually in her own home. Some of the dame schools were partly private and partly supported by the town. In other words the town contributed something to get a woman to conduct a primary school. There were also public dame schools. These were merely public primary schools with women for teachers.

There is one type of school, unique in American history, which deserves mention because of its novelty. That is the moving school. There is nothing for us to learn from this type, but it is mentioned here just because it is interesting. Our colonial forebears had a remarkable capacity to disagree with one another. With all of the unavoidable hardships they had to face they should have developed in a high degree a spirit of coöperation and compromise. An efficient Christian spirit should have helped them, but they were afflicted with dogma more than they were imbued with the spirit. Frequently they had difficulties in locating the school of the town. The towns were small and distances were not great but each patron wanted the school in his part of

town. Perhaps it was fortunate that they had no regular school buildings and practically no equipment. All that was necessary to move a school was for the teacher to go to a different place tomorrow morning. These conditions brought about the moving school. Schools were held for part of the year in one part of the town and then moved to another part.

This type of school may represent to us the opposite of the consolidated school in favor today. No doubt the plan of having schools brought to the door enabled, or induced, some children to go to school who otherwise might never have gone. Those who were ambitious could go all of the year. Others went when the school was handy and stayed away when it was not.

The school hours of the colonial period were much longer than they are today. In the summer it was usual for schools to open at seven o'clock in the morning and close at five o'clock in the afternoon. If the town could afford it the school session continued for the twelve months. Vacations were not considered desirable, but if the town could not afford a twelve month school the term was shorter. In the winter schools usually did not open until eight o'clock because the days were shorter.

Previous to the Revolution nine colleges were established in America. The first of these was Harvard, founded in 1636. At that time there were not more than twenty or twenty-five thousand white people

in New England. Among these there were a good number of men who had received a college education in England. All of these early colleges were organized on the English pattern, but they were so small and so poor financially that they could not offer many courses. Fortunately they did not feel the need of many courses. They were established primarily for the training of ministers. The material equipment of Harvard was pitifully small, but it represented the aspirations of the people, and this meant a great deal. John Harvard had given approximately \$4,000 and about 260 books, mainly religious and classical, to start a school. Others gave smaller amounts of money and made other contributions. The significant thing about the enterprise was the spirit of the donors. Among the contributions were sheep, produce, spoons, dishes, etc. The total value was not much but the public interest was sincere. Not only the people of the Massachusetts Bay Colony, but people of Connecticut and other colonies put their hearts and their money into the new institution. The school was located at Cambridge, partly to have it a safe distance from the distracting influences of the city of Boston. If the earnest and devoted organizers of Harvard had known that at some future time subway trains would carry students to Boston in less than ten minutes through an underground passageway, and that Harvard would have many millions of dollars in wealth and many magnificent buildings, it is doubtful if they would have been will-

ing to risk spoiling the young men by such luxury. Certainly the Harvard of today was not their ideal of a place to train young men, especially ministers.

There were no departments in Harvard until almost the time of the Revolution. Then four departments were organized: Latin; Greek; Logic and Metaphysics; and Mathematics and Natural Philosophy. After nearly a hundred years of financial and religious struggle the annual income did not amount to more than \$4,000. All of the early colleges were denominational, but Harvard was always very liberal. John Harvard was a nonconformist and so also was Dr. Dunster, the first President.

William and Mary College was much better fixed financially. Money was given to it by wealthy people in America and in England. It was likewise more aristocratic. It offered about the same kind of work, and it was established largely to train ministers, but it was not the product of a struggle of the people.

The work offered in all of the colleges consisted mainly of the classical languages and Hebrew. Admission requirements were chiefly Latin and Greek. At one time Harvard did not teach Latin because pupils were expected to have a good reading and speaking knowledge of that when they entered. College mathematics frequently included arithmetic and geometry. The curricula very strongly suggest those of the middle age universities except that the middle age universities had a broader curriculum because they were training students for more callings.

CHAPTER XXVI

REORGANIZATION AFTER THE REVOLUTION

WAR is always detrimental to education. It saps the energies of a people, uses the funds, absorbs their attention, and holds young and old to tasks which at the moment seem more important than education. The American Revolution did all of that for the colonists. Many of the schools were closed, and illiteracy among the young people was the result. The disturbances for a few years before the actual breaking out of war was bad for the country, and the unrest and uncertainty during the years between the close of the war and the adoption of a federal constitution and the complete organization of a national government left education to suffer.

After the political difficulties were sufficiently settled to give a reasonable degree of stability the schools began to receive attention again. The schools of the colonial period were not American in character, they were English schools transplanted, and of necessity somewhat impoverished. The war had developed a hatred of England and a dislike for things English, and a need for a type of school suited

to the new form of government. It was necessary almost to begin over and build a new education. Many persons had developed an increased affection for France, and French influences appeared in the American schools. It was difficult, however, for the French influence to be very great because the language of the French people was foreign and their books were not freely translated. The more powerful factor is found in the fact that even a war with England could not change the English nature, traditions, and attitude of the American people. Even though they were anti-British they still thought English thoughts. They could not get away from themselves.

The fact has been noted often that education is not provided for in the constitution of the United States. That did not indicate a lack of interest in education. In the minds of nearly every one at that time education belonged under the control of the church. In America there were many churches, and no established state church. Which church then should be recognized by the constitution as in control of education? Obviously no one could be so recognized. Religious freedom implied educational freedom. The only way to get a constitution which could be agreed upon by all was to leave education and sectarianism out. If a new constitution were being framed today no doubt education would have a prominent place in it, since education is recognized as the very basis of a democracy. But, considering all the problems which the constitutional convention

had to face it was probably better to make no attempt to regulate education. So far as the law was concerned the matter was left to the several states.

There was, however, a national need, and a new motive for education. This new motive gives the key to American education. It will be remembered that when the Reformation had brought about a break from the authority of the established church that a new motive for education appeared, and this motive was a large factor for more than two centuries. The motive was that each individual must read and interpret the scriptures for himself and thus save his own soul. If individual reason is the guide then the reason must be trained. Education became a personal and religious necessity. In a new nation to be controlled for the people and by the people education was an absolute necessity, not to save their souls but to save the country. If the people are to rule they must be taught how to rule. Whether it is mentioned in the constitution or not public control of education was in the offing. The local or the state government had to pay for the school, and whoever pays for anything controls it. The need for college education was not so widely felt and hence the churches controlled colleges much longer than they did the public schools. One of the things to notice in the development of American education is the gradually growing tendency for the government to control the schools. At first it was mainly a district matter, supported somewhat by

state laws and sometimes helped by some state support. Gradually the states took over more control and gave more support. Likewise the national government has taken more and more interest in education and has made more and more appropriations for certain educational purposes. This nationalizing of schools has gone on in other countries as well as in the United States. The motive for it in all countries has been partly political and partly industrial.

The French influence came chiefly from Rousseau. Pestalozzi had reached maturity but his influence had not been greatly felt; Herbart was born in the year of the American Declaration of Independence, and Froebel was born six years later. These men figured largely in American education a little later. Rousseau had furnished a part of the spirit and content of our Declaration of Independence. He had said that education is the right of every child and that it is the duty of the state to provide it for him. The full import of his educational theory, however, they did not grasp. That education is for all and that it should be paid for by public tax was generally accepted, though not everywhere in the same degree.

The early state constitutions rarely mentioned education. Vermont in its first constitution adopted in 1777 provided for public elementary schools in each town, a grammar school in each county, and a state university. Some changes were made in this constitution a little later, but state aid was provided for elementary schools before 1800. Other states

provided some support and some state control. The state control was exercised mainly with reference to certification of teachers. The requirements were not very high but the fact that the states demanded some definite preparation of teachers indicated a good start.

A form of public support for education which has meant a great deal to the country is that of grants of land for school purposes. Not a great deal was actually done during the period now under consideration but the idea was developed and a precedent was established. In 1785 an ordinance was passed setting aside section number sixteen in each township in the territory which soon after was organized as the State of Ohio. This established a policy for the United States which was generally followed when other states were admitted to the union later. In some states two sections were thus set aside and in some four sections. Up to the present time approximately 132,000,000 acres have been set aside. The value of these lands amounts to several hundred millions of dollars. All of this came as a result of a policy adopted during the constructive period when the states were forming themselves into a national government. Presumably the makers of the nation did not realize how much it would mean both in money and in influence. It made education an affair of the nation even though it was not mentioned in the constitution.

However, even this excellent start made by the

national government did not settle the question of public support of schools by taxation. Taxation for schools was a local matter and the attitude was not the same in all parts of the country. There was a widespread notion that the support of schools was a matter of charity. Schools were maintained by the payment of fees. Children whose parents could not pay the fees were allowed to be educated at public expense. Schools for poor children were commonly called pauper-schools. This name was very unfortunate, and quite undemocratic. If Rousseau's educational writings had taken hold of the people as effectively as did his political writings the schools would have benefited. The poor people themselves resented the system and did not send their children to school as freely as they would have done if the system had been such as to permit poor children to go to school without feeling humiliated.

There are two sides to the argument and the question is still with us how far the government—local, state or national—should go in providing necessities for individuals. Many at that time believed that education should not be interfered with except in the case of orphans and other children who have no one who can pay for their education. The tendency has been for the school gradually to assume more responsibilities with reference to the child. Now-a-days the school looks after the moral and physical welfare of the child, furnishes physicians, nurses, books, and sometimes food and clothing. If

anything is wrong with the child's health or his conduct the parents often blame the school for it. One of the social problems of today is how to keep parents interested in their children. The advancement of the past century, however, seems to indicate that the better arguments are those in favor of public provision for the proper rearing of children. That seems to be the only way to insure the type of citizenship needed. Providing education is not charity. It is a social necessity. So long as education was primarily religious it was for individual benefit. When the objective shifted from individual benefit to civic development a new trend appeared. This trend is a phase of Americanism. The mere fact that we have the word Americanism is significant. Why we do not have the words Englishism or Germanism is not altogether clear. It may not be possible to give a complete definition of Americanism but among other things it means liberty growing out of intolerance. The Puritan was intolerant, yet he desired liberty. He it was who made America. Our resources were so vast that the industrial development was not so great a task as the development of the American consciousness. No doubt the forerunners of Americanism were present during the colonial period but they did not begin to be conspicuous until after the Revolution. The Revolution was not so much a fight *for* something as it was a fight *against* certain forms of oppression. After the Revolution was over and independence was secured a constructive program

was imperative. The nation was built through the integration of conflicting ideas.

There is always a marked tendency for schools and churches to lag a little behind human needs. It was so during this period. The schools used the same text-books as before, and teachers taught by the same methods. Ministers grew less fanatical, but were still narrow and antagonistic to other denominations. The teachers were still poorly paid and poorly prepared. The length of the school terms was reduced. It is very difficult for teachers to look forward because the books they use refer mainly to past conditions. There was as yet nothing new to put into the schools. They had to use the old material because they had not had time to produce new, and besides few of them knew how to think new thoughts. We should not pass this topic without noting that schools for girls were increasing in number. Boys and girls were usually taught in separate schools. Frequently the length of the term for the girls was shorter than that for the boys. Reading and writing were about the only subjects taught to girls, and there were many who thought it was unwise and very risky to teach even that much to girls. They might be spoiled by it. Just how is not very clear to those who are living today.

It is difficult to see how very much progress could be made if it were not for one saving factor. Education is not confined to the school. The times called for action. The schools offered little that was con-

nected with practical life. Important things were coming to pass and people wanted to know about them. They could not find out from the schools but they could find out some things by talking to one another and profiting by the varied experiences. Every traveler brought news from somewhere, and people gathered around to discuss the news brought. The social atmosphere was stimulating. They had turned their backs upon the old world, and they were facing a new world, but like Columbus on his first great voyage they knew not what monsters the unknown deep might hold, nor what lay beyond. Moreover, Columbus might have turned back if his courage had failed him, but these people could not turn back. Time moves in one direction only, it never reverses. They must go on, and they must be their own pilots. There was a thrill in the situation for any one who could grasp it. Slowly the schools caught the spirit and from that day to this they have been advancing with steadily increasing acceleration.

CHAPTER XXVII

THE EARLY NATIONAL PERIOD

WHEN the states had succeeded in adopting a constitution, and the first President had assumed the duties of the office a new nation existed, at least on paper. But a nation is made up of people. The written constitution represents, as nearly as may be, the will of the people. To make a nation real it is necessary to have a united will, common attitudes, and shared interests. If a nation had existed for a long time a convention might formulate a constitution which would express the wills, attitudes, and interests of the people, but to build a new nation is a much greater task. To organize a government is one thing, to organize a people is very much more. The task before George Washington and his associates was to build a nation. The first step in this was to develop a national consciousness in people who had come from various countries, who had never been united except for purposes of war, and whose geographic, economic, industrial and social conditions were very different. America is commonly called a melting pot for the amalgamation of varied races and nations, but the figure is rather extravagant. People do not readily melt, the amal-

gamation takes a very long time, and the resulting compound is likely to be unstable. Rather should we call America a great mosaic where many forms and materials and colors are arranged into a beautiful pattern. The opportunity and the challenge to the individual citizen was to develop by extraction or production the physical resources of the country; the opportunity and challenge to the leaders of the nation was to promote national consciousness and to develop the people to conform to the high ideals which had actuated the organization of the government. The building of consciousness requires education. Washington fully realized this and he spoke many times effectively in favor of general education. In his farewell address he said:

In proportion as the structure of a government gives force to public opinion it is essential that public opinion be enlightened.

Just when the early national period closes and the period of expansion begins is largely an arbitrary matter. The growth has been gradual and continuous, but it will be convenient if we make a break sometime during Jackson's administration. He was President for two terms beginning in 1829.

The process of getting ready to renew education has been mentioned in the preceding chapter. At the very beginning of the constitutional period education was considered and approved, but what education to give and how to organize it was the problem.

It was not a time for one or two profound thinkers to sit down and think out a theory of education and present it in a book. While some one was doing that the people would remain in ignorance. It was a time to take education to the people, and it should be taken quickly. Means must be devised by which to do it. Teachers, books, and buildings were the first needs. If the country had had a sufficient number of well trained teachers the problem would have been simple. They could have prepared a program and the people no doubt would have accepted it. But only a very few were prepared to teach. It is always difficult to begin any new educational enterprise because teachers are not trained for the work and it takes time to train them, especially when there are but few persons able to give them the needed training. It was hard to get started, and the start was necessarily slow. We have seen how impractical and narrow the available text-books were, but there were no others. It was necessary to write some. This takes a long time, for books must be tried out and gradually improved by the teachers who use them. Buildings and equipment were greatly needed, but the people were poor. The surprising thing is that the people went to the task so courageously.

In times of plenty and prosperity woman has been an entertaining, attractive and much desired luxury, but in time of stress and trial she rises valiantly and prepares for service. During the Revolution women helped in the ways open to them in war. After the

Revolution there was still need for much service outside the home. The fields and forests and factories were calling for men. Who should teach the schools? Women had done a little teaching before, and now they offered to do more. Greater numbers of women entered the schoolroom. In proportion to their preparation they were successful. The opportunities for the education of girls had been very limited, and therefore very few of them were ready to teach. They were suited by nature for the work, they were "patient, long suffering, gentle and fond of children," there were few occupations other than house-keeping open to them, and they were willing to work cheap. Hence they were employed. The cheapness was no doubt the strongest argument in the minds of the majority of people. Women teachers were cheap but ignorant. At first thought that looks bad, but there was a good side to the situation. The leaders saw at once the only solution for the problem—that is, establish training schools for women teachers. Thus the early establishment of normal schools in America was due chiefly to the ignorance and cheapness of young women teachers. The results in the long run were far better than they would have been if those first women teachers had known enough to get along without special training. We of today should give thanks for their ignorance.

The first training schools for teachers were not called normal schools. Usually they were departments of seminaries already in existence. In 1823

Samuel R. Hall organized a training school for teachers at Concord, Vermont. This was the first training school in the United States. One of the innovations introduced by Mr. Hall was the use of blackboards. Mr. Hall was a practical man and did much for the improvement of teaching. He wrote a book called *Lectures on School-Keeping*; and another called *Lectures on Female Education*. His work prepared the way for normal schools. The seminaries did good work, but they could not prepare enough teachers to meet the needs, and for many years there was continual cry for more and better teachers. The seminaries supplied only a small part of the need, and the schools as a whole were in very bad shape, but a beginning was made. Degrees for female teachers were opposed as in bad taste, and it was thought that a degree might make a woman unfeminine. By the middle of the nineteenth century however women teachers were in the majority.

Text-books should have received attention early. No one knew how to write a text-book except by taking the old ones and trying to improve on them. Some improvements were made in the spelling book, but there was no principle to guide the author even in so simple a thing as a speller. The same is true of every other text-book. Criticisms of the old books were made and there was expressed by the more progressive teachers a demand for better ones. Improvements finally came but it was a long time be-

fore books were written which were adapted to the learner or to the needs of life. The binding force of tradition prevented rapid progress.

In spite of the fact that education was becoming the chief support of the democratic state it was not very generally regarded as desirable for the local or state governments to support schools by taxation. The schools were supported by tuition, but provision was made for the poor to have free tuition. Numerous societies existed for the promotion of education, but these spent their energies mainly in working for the education of the poor. However, during this period there is found a significant tendency to increase the number of tax supported schools. The free school maintained by public tax has been one of the outstanding achievements of American commonwealths. The growth of tax-supported schools dates from 1800.

Among the organizations which spread education among the people was the secular Sunday school. These schools were conducted on Sundays for the benefit of those who wished the rudiments of an education but could not spare the time to go to a regular week-day school. These schools served much the same purpose as do night schools today, but they were not trade schools such as are common today. In them were taught the traditional subjects, chiefly reading and writing. The idea of special vocational training had not yet appeared. Schools of this type had existed in England for some time be-

fore they were introduced into this country, and in both countries they served a useful and obvious purpose.

The chief task of the period was to carry education to the people and to secure support for schools. A few educational journals were published before 1835, but their contribution was small and their influence not great. A little later educational journals increased in number and in strength.

To call the few subjects taught a curriculum seems unduly pretentious, but that is the word we use now. The main thing to note is that the content of the subjects taught was becoming more secular. The pupils learned to read as before, but what they read was different. The world of things received more attention than it did before the Revolution. At one time Geography was required for admission to Harvard College. History was not a school subject, and probably it was well that it was not. The early histories were accounts of wars, and they did much to preserve the spirit of hate and distrust among nations. This country had just been in a war with England, and yet there was little in the schools which tended to continue the ill feeling engendered. As soon as histories were written the war spirit was encouraged. The school readers contained patriotic orations and some other material relating to war, but in the main the schools of the first few decades after the Revolution gave little thought to the war. The period following the Civil War was very differ-

ent in this respect. The history which was taught in the northern states was very different from that taught in the southern states and in both sections it was much biased and full of antagonism. The soldiers of the federal army fought to preserve the union, but the teachers of the country taught to preserve the feelings of discord. After the Revolution, however, the people were too busy with their difficult constructive program to spend much time discoursing on the war they had just finished. It is a fortunate thing that the schools did not have histories such as were in use during the last half of the nineteenth century.

The spreading of the population called for the establishment of school districts, and the district school was a characteristic feature of American life for a century or more. The social life in these schools has been an entertaining subject for literary men to write about. It is not necessary here to give details or to elaborate the humorous or pathetic situations typical of the daily routine. If the pupils were big enough to whip the teacher he was likely to be turned out and another teacher hired, if the teacher was big enough to whip the pupils they were likely to have a rather painful time. The content of the lessons taught was not very valuable, but the pupils learned something and acquired the power to educate themselves somewhat after the school period was over. Most important of all, these schools were close to the people. They were controlled by local school boards. As a rule the members of these boards knew

very little, but they were interested in the school. The school was the important institution of the community, and the building was often something of a community center. We may poke fun at the "destrict skule," but it saved America from a long period of illiteracy. Supervision scarcely existed, though as early as 1812 New York created the office of state superintendent. However, the office was soon abolished and was not restored until 1854. By this date the professional superintendent had become a recognized part of the school system.

Perhaps the greatest contribution this period made was the establishment of public "infant schools." That name sounds odd at the present day, but children had been expected to learn to read before they came to school. It was the mother's duty to teach them this. Often, however, neither mother nor father could read. Dame schools partly met the need, but the system of primary education was very poor. To improve this condition infant schools were made a part of the public school course. Teachers had no special training for the work, and the methods used were crude, but the children were less often neglected. It took a long time for a child to learn all of the letters in the alphabet, but no one had thought that a child could begin to read until he had learned the name of every letter. How could he learn the word "cat" till he knew that the first letter was called *see*, even though that is not the sound the letter has in this word? The unreasonableness of beginning a

child's education by compelling him to learn the names of the letters is sufficiently obvious now, but many generations of children were taught that way before any one thought of the conscious processes which the child had to go through while being thus taught. How stupid human beings are—including teachers! How hard it is to think oneself out of a tradition! What posterity may think of us is not for us to grasp. In spite of the methods used, the infant schools grew rapidly, and soon became known as primary departments in the public schools.

The financial difficulties under which people worked led to the establishment of a type of school which had many defects but served a useful purpose and no doubt promoted education more rapidly than would otherwise have been possible. A monitorial system had been developed in England chiefly through the efforts of Joseph Lancaster. By this system pupils were taught by other pupils. One teacher could direct and supervise the work of a large number of pupils and hence the expense was small. The pupils were divided into small groups and each group was taught by a monitor. The teacher could see that the monitors were teaching the right things and in the right way. Nearly all of the study was memory work and hence the monitors did not need to know anything beyond the mere verbal statements of the book. The system was widely used in the United States as well as in European countries. In 1818 Mr. Lancaster came to this

country and stimulated an interest in his system. The merit of the system was its cheapness; its defects need not be mentioned. As soon as the country became prosperous enough to maintain better schools the Lancastrian schools were given up.

A conspicuous type of school of this period was the academy. Academies had existed before the Revolution, but they grew in importance during the early national period. The Latin grammar schools had been too narrow in their interests. They were almost entirely college preparatory schools and taught little but Latin and Greek. The academy was a school of the people, and taught a greater variety of subjects. Some of these academies had received endowments from generous persons, and some received partial support from taxation, and nearly all charged tuition. Some of them were owned and controlled by religious organizations, and some were owned and conducted by private individuals. They were far more democratic than the grammar schools. They were established to provide for the common people a little of higher education without the expense of going to college. The curricula of the colleges were planned for a limited number of people with very limited interests. The academies spread education and popularized it. The fact that the academies ceased to exist with the development of the country does not mean that they were unsuited to the needs of the people. As a rule the academy was either developed into a college or into a public high school.

The high schools do the work of the academies but do it even better and reach still more people. The three types of secondary school which have existed in this country are the Latin grammar school, the academy and the high school. It is noteworthy also that the academies offered education to girls. Some of the academies were coeducational and some were for girls only. The school established in 1821 at Troy, New York, by Mrs. Willard has been famous for its influence in promoting the education of women.

With the multiplication of schools and the widening interest in education came a broadening of the college curriculum. Colleges also departed somewhat from the English type after which they had been patterned. French and German universities exerted a noticeable influence, and the American spirit and needs began to mold the life of college students and to determine the character of the work. The establishment of state universities provided institutions comparatively free from denominational influence. The University of Vermont was established in 1791, and North Carolina and Tennessee established state universities before 1800. Other states followed, and state support of higher education soon became an accepted policy.

CHAPTER XXVIII

HORACE MANN AND HIS TIMES

IT is hardly just to name a period for one man, when there were many others who contributed largely to the progress of education during the same years, and yet the biography of Horace Mann would record so much of American education from 1837 to the Civil War that it seems appropriate to use his name in the title. Brief sketches of a few of his fellow workers will be given before tracing the general course of educational growth.

Fifteen years younger than Horace Mann was Henry Barnard (1811-1900) who has as good a claim to represent nineteenth-century education in America as has any man who ever lived, but the present chapter will be confined to the period before the Civil War, and Barnard's activities continued many years beyond that date. During the time that Horace Mann was laboring in Massachusetts Henry Barnard was carrying on similar work in Connecticut. Barnard's activities extended over a much wider range than did those of Mann. In Connecticut in 1839 he organized the first teachers' institute ever held in America. In Rhode Island he organized the

first state teachers' association in America. He wrote the first book on school architecture ever published in America. It would have benefited the schools greatly if it had been read more than it was. It requires a stretch of the imagination to think of the school buildings of the middle of the nineteenth century as having any architecture. For 26 years he edited the *American Journal of Education*—a journal of wide and profound influence. He interpreted to teachers in this country the works of Pestalozzi, Froebel, Rousseau, and Comenius. He was President of the University of Wisconsin and of St. John's College. He organized the United States Bureau of Education, and was United States Commissioner of Education. He profoundly influenced every phase of education from the kindergarten to the university. To raise the level of society through the extension of schools and the improvement of teaching was the aim of his life.

David Page (1810–1848) would have first place in the nineteenth century if judgment were based upon the influence of a published work. Page's *Theory and Practice of Teaching* was read probably more than all other pedagogical treatises. It was published in 1847, and for a half century it was the main guide for the daily work of the teacher. He was the first Principal of the Albany (N. Y.) Normal School, and was a recognized leader and an effective speaker.

Administrators seem to make the education of a

nation, writers furnish ideas to a great mass of readers, but education would be formal, characterless, and lacking in power if it were not for the direct stimulation of the personal influence of the great teachers who have molded the lives of their students. No doubt there are thousands of such whose names do not appear in history, but the name of Mark Hopkins stands out as the representative of the class. It has been said that "with Mark Hopkins on one end of a log and a student on the other there is a university." Hopkins was a teacher and for many years President of Williams College. His writings were not widely read, and his activities did not cover a large field, but he was impressively human, and his influence was spread through the lives of his students.

As a sample of the widening of the curriculum the name of Lowell Mason might be added. He was responsible for the introduction of music into the public school. He organized the Boston Academy of Music. His first effort to have music put into the elementary schools of Boston failed, and then he taught music to large classes of children without pay for several years. The results were so satisfactory that music was given a regular place in the Boston schools. Later Mr. Mason trained teachers of public school music in the normal schools of the state. He published many popular music works and did much to provide music for the masses.

Thus there were far-sighted, intellectual, and en-

ergetic men who compare favorably with any group of men in any country at any time. Their work was not in vain, but there was much to do. The people were poor, and the majority of them had very little of comfort in their homes, and they did not expect children to have comforts or conveniences in school. The schools were almost without equipment and very few of them were graded. Sanitation had scarcely been thought of for the home or for public institutions of any kind. Cleanliness was generally neglected, and often opposed. Even bath tubs were opposed on religious grounds, largely because they were thought to encourage self-indulgence and a liking for luxury. The idea of making school buildings attractive was entirely beyond the majority of people. The heating, lighting and ventilation of buildings received scarcely any consideration. Very few schools had any supervision except the visits of the members of the local school boards, who knew nothing about school except that they wished everything done as it had been done when they were pupils, and in some places the visits of the ministers, who were chiefly concerned in finding out if the children knew the catechism and had religious books to read. It was not uncommon for children to study their lessons out loud in the same manner that they did in Chinese schools. Often it was regarded as too much of an innovation when a teacher wished to have the studying done quietly. The majority of teachers had less education than is now given in a good one-

room rural school, and they had no special training in teaching methods. The school terms were short and attendance was irregular. Add to these conditions the staunch, abiding character of human nature which holds people to their habits of life without seriously considering the results, and we have some impression of the problems which faced Horace Mann and the other leaders who had visions of better conditions, and were working to bring about the needed changes.

There is also a brighter side to the story. At this time there was a general educational awakening in this country and in Europe. The influence of Rousseau, Pestalozzi and Froebel was felt on both sides of the water. William Maclure, a wealthy business man of Philadelphia, after visiting Pestalozzi and some of his followers in Europe became enthusiastic over the methods used and he contributed large sums of money to promote Pestalozzian methods in this country. Newspapers, ministers, and leaders in social welfare work were urging improvements in the schools and more extensive education of the masses.

In 1837 the Massachusetts legislature passed a bill creating a State Board of Education which should appoint a secretary whose duty it should be to study the condition of the common schools and make reports to the Board and disseminate information to the people much as the United States Commissioner of Education does today. The authority actually vested in the Board or in the Secretary was very

small, but it made education a state affair in a more effective way than it had been before. Horace Mann was a lawyer by training, and he had served in the House of Representatives and in the Senate of Massachusetts. He had been influential in securing legislation for public welfare, and he was largely responsible for the passage of the act creating the State Board of Education.

His work was to organize the educational forces of the state, stimulate public interest in the schools, increase the revenue for school purposes, and improve the work of teachers. He wished also to make the schools more democratic and to make the future citizens more able to do their share in the affairs of government. Though the people had subscribed to a democratic constitution they were not very democratic in their attitudes. The schools were called the "common" schools, but the word common often carries the connotation "inferior." Many regarded the public schools as places for the poor. The well-to-do felt that their children should have something better. These class distinctions retarded the progress of the public schools, prevented the building of a true democracy, and interfered with appropriations for school purposes. The taxes paid for the support of schools were regarded as charity.

The improvement of teaching was greatly needed but it did not present so difficult a problem as was the molding of public opinion. There was an acrimonious controversy over the creation of a state board

and the election of a state school official as secretary of the board. The quarrel was partly over the question of centralized or local control. If this country had been a monarchy the rulers would have told the people what to do and a system could have been worked out in comparatively short time, but where the people rule they must share in the efforts for progress. The whole people must be educated, and that is not a small task. Many honestly feared that a centralized board would lead to the European type of despotism, and the cry of liberty was raised and this always makes an effective appeal to the masses. The churches opposed the program because the state board was necessarily non-sectarian and the church leaders were afraid that religion would be taken out of the schools. Many of the teachers opposed the Board and the Secretary largely because they thought their jobs might not be so secure. The arguments in Massachusetts ninety years ago were very much like those used in one state or another ever since. After Mann had the work well under way he met with opposition to nearly every measure he proposed. The reasons for the opposition were based upon two factors: either the people did not understand the measure or they thought it would interfere with their own interests. This condition is not peculiar to Massachusetts nor was it limited to the past century. As a matter of practical evaluation of the magnitude of Mann's job he was paid a salary of \$1500 a year with no allowance for office or trav-

eling expenses. Under these conditions his sacrifices and deprivations compare with those of Pestalozzi.

The first step in Mann's program was the arrangement of public meetings in various parts of the state for the purpose of creating greater interest in education. To arouse the masses of the people required a prodigious effort. The meetings were sometimes well attended and sometimes only a few persons came to hear the address, but gradually the ideas spread and communities were induced to provide better conditions for the education of their children.

Horace Mann was by temperament a builder, and he saw in advance the whole educational system and how each part was related to the other and dependent upon the other for its success. His campaign included pleas for better buildings and better equipment, with some approach to sanitation. In this he was partly successful. Longer school terms were needed if the children were to secure even an elementary education. Better books and more of them were needed. He secured some degree of uniformity of text-books and he secured a start toward the establishment of school libraries. The greatest need was for better trained teachers. He established normal schools, conducted teachers' institutes, and provided a beginning of supervision. Under his direction the pauper schools ceased to exist, public schools were made free in the real sense of the word. Tuition was not charged and the schools were supported by taxation. There was a great increase in the number of

schools and in the number of pupils attending them. Salaries of teachers were increased. Is it proper to use the word salaries when men were paid \$25 a month and women half that amount? The curriculum was enlarged to include history, geography, and even music. The schools became democratic in spirit and non-sectarian in control. There was even some consolidation of schools, though of course the consolidation could not include so large a territory as is now included, because the facilities for transportation did not permit of such large districts. Colleges, academies and public schools improved in every way, and many of the high schools offered a wider range of subjects than had previously been offered in the colleges. It is especially noteworthy that higher education for women had its beginning in this period. Mount Holyoke College was founded by Mary Lyon in 1836.

The annual reports of Horace Mann were scholarly treatises on conditions of the schools, educational principles, and recommendations for improvement. In these he presented statistical and other information, discussed the problems of the times, and urged necessary reforms and expansion. These documents were the ablest contributions to educational literature made in America before the Civil War.

While Massachusetts was in the lead educationally other states were making similar progress. The leaders in many of the other states were following Mann

in their efforts to improve their schools. It would, however, be too much to expect all of these improvements to take place in all schools. A great many schools in Massachusetts as well as in other states were scarcely affected by all of these efforts. Human progress is slow and great numbers failed to understand what was going on.

Outside of the schoolroom advancement was more conspicuous than it was in it. It was a period of great territorial expansion, and growth of cities. The population of the country was still largely rural but many cities existed and these offered a stimulus to improvements. Industry was not much organized, and production was largely individual but it was rapidly increasing in quantity. Industrial education had found very little recognition in the schools. The schools were usually content with political, moral, and literary information. The westward movement of civilization had a great influence upon national thought. Conditions on the frontier were not favorable to provincialism nor to class feelings. The democratic attitudes of the west slowly permeated the east.

In the field of literature this was the American golden age. In this period lived Longfellow, Lowell, Emerson, Whittier, Thoreau, Bryant, Irving, Holmes, Cooper, Poe, Hawthorne, Louisa Alcott, Greeley, Webster, and numerous others who were writing a sweet, chaste literature, expressing the purest American sentiments, and reflecting but little

of the indelicate, coarse and sordid features so common in the literatures of Europe. The influence of these men upon the homes, the schools, and the general intellectual and social life of the century is beyond comprehension. Pity it is that with such an intellectual environment our country allowed itself to be dragged into a war which engendered bitterness and distress lasting more than a generation, and for a time robbing the nation of the benefits of this beautiful heritage.

CHAPTER XXIX

A PERIOD OF PREPARATION

THE period from the Civil War to 1890 might be regarded as a period of slow progress. While Barnard and Sheldon and Harris and other profound men were thinking and expressing progressive ideas the great mass of teachers were blindly following the practices of the previous generation. This does not mean that the period was not a productive one. People were lifted out of ruts, they looked around, saw some things in a new light, and got ready to do something different. Without the work of a few leading men the progress which followed would have been impossible. Educational improvements are usually slow to reach the classroom teacher. If a complete report of all that was done in all of the schools of the United States were made the summary might look like stagnation. If a review of tendencies and innovations were made the summary would look like remarkable progress. Our concern will be with the latter. The former may be left for our grandfathers to describe for our wonder and amusement.

The outstanding new conception which changed the world's thinking more than any other idea ad-

vanced since the advent of Christianity was the theory of evolution. This conception was bitterly opposed for many years, and even yet there are a few persons who do not accept it. The theory was fought over during the entire period now under consideration and by about 1890 it was generally accepted, at least by scholars, and after that date it formed the basis of philosophy, psychology, sociology, and education, as well as of the biological sciences. The theory of evolution did not have much influence upon the schools of this period except in the teaching of the natural sciences. To have carried the issue to the point of general acceptance was, however, a service of untold value to educational theory. It remains for succeeding chapters to mention some of the phases of education which have been influenced by the discovery of the law of evolution.

The studies of evolution were merely a part of a widespread scientific movement. An interest in science dominated the period somewhat at the expense of literature—especially of the poetic. Unless an entirely new sort of poetic feeling can be aroused the scientific cannot be poetic. Attention to details and over definiteness destroys poetry. "When the sun was low" is a more poetic expression than "six o'clock P. M." "A venerable oak" is better than "an oak 279 years old." Science deals with forces within things in measurable quantity, not with mysterious general forces behind them. "Mountains, who was thy builder?" is more poetic than "Mountains, how

were you made?" The age was scientific, and therefore inclined to think less of beauty and more of meaning, less of impressions and more of understanding, less of feeling and more of law.

At the same time there were developed new attitudes toward religion and the Bible. The life of Christ became more significant than his death, and the daily lives of human beings became more important than their creeds. Religion became less austere, but there was more of human sympathy and brotherly feeling. Service to God's creatures became the highest service to God. Religious doctrines could not be taken into the school but the new spirit permeated the better classrooms, and the whole atmosphere became more wholesome.

Economic and industrial changes were taking place rapidly. Immigration was heavy and the population was increasing, especially in the cities. A great number of inventions and discoveries, and the organization of industries brought marked changes in the manner of living. The Americans took to machinery and business organization, while the people of Europe took rather to skill and technical knowledge. This country was becoming a manufacturing nation, and with an increase in the amount and complexity of machinery there was required an increase in knowledge. A horse has intelligence enough to relieve the driver of a part of his responsibility, but it is not so with the machine. The education of the masses must keep pace with the progress of machin-

ery. Rural life changed less rapidly than did urban life but it changed steadily, and if the improvements were expressed in percentage probably the figure would be as large.

These changes were accompanied by changes in the schools. In the first place the people had more money and they could afford to provide better educational opportunities for their children. Poverty had been an important factor in preventing the progress of the school. More money made possible better teachers, better equipment, and a broader curriculum. The new demands also led to the creation of many agencies for the spread of education among children and among adults.

To secure better teachers the states established many new normal schools, but not enough to supply the demand for trained teachers. By 1885 there were in the United States more than a hundred private normal schools rendering good service to their constituents and returning good profits to the owners. Gradually the states appropriated the money to increase the publicly supported schools, and the private institutions have nearly all disappeared. The willingness of teachers to attend private schools and pay for the support of them indicates a professional interest worthy of more commendation than has usually been given. The history of each of these normal schools would be a record of valuable service, but at present only two will be mentioned.

The State Normal School at Oswego, N. Y.,

under the guidance of Dr. Edward A. Sheldon, became one of the best known and most influential schools in the country. The city of Oswego coöperated with the Normal School to such an extent that it deserves equal credit for creating a center from which the principles and practices of Pestalozzi were spread throughout the United States. In 1861 Dr. Sheldon brought Miss Margaret E. M. Jones from England to help organize their work, and especially to demonstrate the effectiveness of object lessons. At that time such lessons were very new. At first the training school was conducted by the city, but in 1866 it was taken over by the state and became a State Normal School. Many of the teachers who were trained in this institution went out to other normal schools and carried with them the new ideas.

Another normal school of local support but of national influence was the Cook County Normal School (Chicago). The reputation of this school was due to the personality of its head, Col. Francis Wayland Parker, more than to any other one factor. From 1875 to 1880 he had been superintendent of schools in Quincy, Mass. Under his leadership revolutionary methods were adopted, i. e., revolutionary for that date. They would not be regarded as revolutionary now. The work was not confined to drill on the conventional subjects, but children were given interesting information about the world they live in. Teachers were given freedom and encouraged to exercise individual initiative. He believed that good

teachers in the schoolrooms were far more important than formal regulations. In 1883 he became Principal of the Cook County Normal School. He gathered around him a strong faculty, and teachers from all parts of the country came to Chicago for inspiration and instruction. Will S. Monroe has said that "No other American educator has done so much to modify and enrich the course of study in elementary schools."

It would be too much to expect that everything done in the normal schools was perfect. Pioneering in any field is sure to produce some extravagant expectations along with its progress. It was the normal school mainly that brought psychology to the service of education, but often it was used with poor understanding and lack of judgment. They assumed that their pupils would fit their psychology, and they studied their psychology more than they studied their pupils. Mental discipline was commonly accepted as a fundamental psychological principle. Teachers commonly adopted the older psychology, which held that the mind was made up of separate faculties which would be developed if duly exercised. Proceed from the simple to the complex was a much emphasized psychological principle, but one which is easily misunderstood. An object simple in structure may not be easier to comprehend than one that is complex. A pine knot is simpler in structure than is an electric lamp but it is not easier for a child to understand how people could make a light out of a pine

knot and see to read by it. Starting a fire by friction is simpler than the chemical process involved in lighting a match, but not easier for the child to comprehend. Object lessons include the use of the senses, and hence any device which stimulated the use of the senses was supposed to be highly educative. In spite of much misdirected energy improvements were being made and gradually the useless is being abandoned.

A significant advancement is shown in the introduction of departments of education into the colleges. Colleges were slow to take up a systematic study of education because they accepted tradition without question. Professors were interested in their respective fields of study and each believed that a student who knew his particular field was educated, and beyond that he rarely stopped to investigate. In 1879 Dr. William H. Payne became Professor of Education in the University of Michigan. This was one of the first professorships of education to be created in America. Very few books were available for the department. Dr. Payne translated from the French Compayré's *History of Pedagogy*, Rousseau's *Émile*, and other works of value to the student. He wrote several contributions to the science of education. Other universities followed the example of Michigan and established similar chairs, though not much progress was made till after 1890.

By 1860 there were more than two hundred colleges in the United States, and within the next thirty

years about two hundred more were established. This was preëminently the period for the building of colleges, though the attendance was small in nearly all of them. A college with a thousand students was regarded as a large college. The new type of institution was the women's college. Coeducation was getting well established in the middle west, but it was not yet popular in the east and south. In a few colleges an annex for women students was established. There seems to be no very good reason for this form of administration except that it makes possible the preservation of some of the traditions of the men's colleges and it affords a compromise with those who are not in favor of coeducation. Vassar, Wellesley, Smith, Bryn Mawr, and Goucher Colleges were established for women. Mount Holyoke College had existed as a seminary for a half century before receiving the name of the college. In 1865 Mills College was founded at Oakland, California. This is the only women's college on the Pacific coast. The south was too poor for the first quarter of a century after the war to build good colleges for women. Even the men's colleges which had existed before the war were poorly supported and could not maintain high standards. For a short time during the war William and Mary College was maintained by a faculty consisting of one professor, who was physically unable to be in the army.

Aside from the increased number of colleges and the increase in enrollment the outstanding achieve-

ments of higher education were: (1) A change in view point. Instead of looking entirely at the past they began to look at the present and even somewhat toward the future. The earlier colleges had spent their time on the ancient languages and literatures, philosophy, religion, mathematics, and a little science. They scarcely thought of trying to discover anything new, and even their science was not very progressive. Neither did they think of applying their knowledge to improve conditions. Their aim was to help the student to acquire some of the knowledge which had been produced in the past. The new view point suggested that there might be something more to discover, and that the discoveries might improve the world. This meant that the colleges were to be intellectual leaders instead of followers. This change brought in an entirely new order of things, and many persons found it difficult to adjust themselves to the new spirit and the new practices. (2) A rapidly expanding curriculum. The few subjects studied in the earlier years could help but little with the new purposes. Fields of study suited to the needs must be introduced. Many of these were put into the liberal arts colleges and hundreds of others were given in professional and technical schools. It soon became possible to go to college and prepare for almost any line of intellectual endeavor. (3) Following the expansion of the curriculum came the elective system. With a great variety of interests and aptitudes, and a great number

of variations in vocation fixed curricula no longer met the needs. Just how much liberty of choice should be given to the student is still an unsolved problem, but certainly a student has a far better chance to carve out his own career than had former students.

Grants of land made by the federal government for educational purposes have been mentioned before. Thus began federal aid. In 1862 Congress passed the Morrill Act, making large and increasing appropriations for the support of colleges teaching agriculture and the mechanic arts. Other appropriations were made later for experiment stations and for extension work. The result has been a great development of agricultural colleges in every state in the union.

A further step taken by the national government was the creation in 1867 of a Bureau of Education in the Department of the Interior. The purposes of the bureau were mainly to collect facts, compile statistics, and disseminate information. The bureau has rendered a distinct service to the nation, and as our educational problems become more national in scope a strong movement has been started to raise the bureau to a department.

A few teachers' organizations were formed before the Civil War, but after the war these were multiplied in number and greatly strengthened. The largest of these is the National Education Association, organized in 1858, including in its membership

all classes of teachers and school officials. There are also a great many national organizations of teachers in special fields. Nearly every science has its organization, the language teachers have theirs, and history, mathematics, and every subject of importance has a place on the list. The American Association for the Advancement of Science, while organized in 1840 should be mentioned in this period because it had much to do with bringing about the new attitude in college teaching. Its chief purpose is to promote scientific research. State teachers' associations and local organizations became common throughout the country. All of these stimulated education and helped to direct it. An entirely unique type of society was the Chautauqua Association, organized in 1874 for the purpose of training Sunday School teachers. It soon enlarged its field to include a general education for adults. Courses of reading were outlined, lessons were given by correspondence, and institutes were held in many communities. Entertainments of a wholesome and cultural sort were mingled with the serious lectures and study. Thus the lives of hundreds of thousands of adults were made richer, and presumably their efficiency increased.

The growing interest in education made the time seem ripe for the publication of school journals. Several hundred of these were published, but many of them were short lived. There was not enough material to fill so many of them and hence many

were poor. However, some of them were well edited and have continued to the present time. They have stimulated professional study on the part of teachers and have contributed much to educational advancement.

Another type of institution created in this period and now grown to huge proportions is the correspondence school. These schools met an extensive need on the part of adults who had not received the amount or the kind of training which they needed. The first correspondence schools to reach large numbers of people were privately organized. Universities did not offer work by correspondence to an extent worth mentioning until a later period. The universities undertook some extension work but even that did not grow into large proportions until later. The private correspondence schools often advertised extravagantly and claimed to do more than they could do, but they did help those who needed help and they gave just the kind of help that was needed. Their success taught the colleges some things about practical education, and taken as a whole the movement must be regarded as a great achievement in the education of the masses.

Within the schools some progress was being made. In 1873 Dr. William T. Harris, Superintendent of Schools in St. Louis established the first public school kindergarten in the United States. A few private kindergartens had been conducted before that, but they had done little more than to serve as suc-

cessful examples of what could be done. The enterprise in St. Louis attracted wide attention and soon other cities established kindergartens as a part of the public school system. Many of these schools were aided by private philanthropy, and some depended in part upon tuition, but they grew in favor rapidly, and soon became accepted as a regular part of the public school.

St. Louis also has the credit for putting manual training into the public schools. In 1880 a manual training high school was opened. A little work in manual training had been done previously in this country, but rather as something extra than as a regular phase of education. In Europe this type of work had been carried on for several years. The work made a strong appeal to pupils, and it opened up a field of interest to many pupils who would find little of value in the older type of studies. In a short time it spread to other cities. By 1888 it began to appear also in the elementary schools. Cooking and sewing were introduced into the schools at about the same time. At first the manual training work was not very practical. It was often supported on the ground that it gave exercise to the mental faculties, it developed the powers of observation, reason, and will. The making of geometrical forms and a variety of useless objects was supposed to promote a wonderful mental development. A second idea was that mental development was secured by self expression through making things with the hands. For some

pupils mechanical expression was more natural than verbal. The third argument for manual training was its practical use in teaching the pupil to do things which he would be likely to need to do, and the skill he would acquire would be beneficial to him. Even though some of the arguments were not at all sound the work became popular and it remains as one of the outstanding contributions of the period.

It was Dr. William T. Harris who turned the eyes of the world upon St. Louis for a decade. The reputation was not confined to the United States. Dr. Harris was an unusual combination of a philosopher and practical man. He was one of the chief exponents of Hegelian philosophy, but he believed philosophy was a practical subject, because its function was to interpret the institutions of civilization, and thus help to promote civilization. His writings on education were profound and widely read. He held that school work should be based upon psychological, sociological, and philosophical principles. In his administration of the schools of St. Louis he was guided by thought and not by tradition.

Within the schools of the traditional sort the curriculum was broadening somewhat though not rapidly. Previous to the Civil War history was taught but very little. After the war history became a common subject. The subject matter was not very good and the methods were quite bad, but the subject gained recognition, and later decades improved both the content and the method. The content con-

sisted mainly of a biased point of view about battles, together with a list of facts to be memorized. If the pupil had memorized the dates of all of the battles, the names of the commanders, the number of men killed on each side, and the immediate result of the engagement he could pass the history examination. The pupil learned the text line by line and usually knew when he was reciting from the top of the left hand page and when he got to the bottom of the right hand page. He was required to know certain facts but the understanding of movements and tendencies was rarely considered.

Methods of teaching received more consideration than did the curriculum. Nature study came in chiefly because it afforded an opportunity for the application of the objective method and sense training. These methods had good possibilities in them but they were often used with extravagance. Many teachers thought if they had before their pupils any sort of a hodge-podge of miscellaneous objects for the pupils to perceive through the senses they were getting a valuable training, no matter what they perceived in the objects and no matter what the relations of the objects might be. Some of them thought that the less related the objects were the more educative the process.

Oral English and language lessons made a feeble attempt to displace formal grammar in the elementary schools, but definitions and rules still received far more attention than habits of speech. One of

the several hundred rules which the writer learned in his boyhood was, "Never use a preposition to end a sentence with." It is easy to make valid criticisms of the practices, but they were moving toward better things. Spelling matches in schools and between schools were very popular, and they stimulated a very great interest in spelling. It was not uncommon for children to spend their recess periods having spelling matches among themselves and in coaching one another for a contest planned for the near future. Mental arithmetic was used by the teachers to sharpen the wits of the pupils and by the pupils as a game. The problems were more often catchy than practical but they helped to enliven the school. Even penmanship was taught in a very formal way by the use of copybooks. Writing was learned synthetically. The pupil was first taught to make all of the curves and lines used in making the letters, then he would put these curves together and make letters. When he could do that he could have a copy at the top of a page, and he tried to write like the copy. At least the first line was made as much like the copy as he could make it. From there to the bottom of the page he copied his own writing on the line just above. Geography was taught almost entirely as a memory subject, and it consisted of learning names. The pupil who knew the names of the countries of the world, the names of rivers and their length, the area of lakes, the location of bays and capes, and could bound the states of the union and

name the capital of each could pass geography. The reason teachers taught in this way is that it was the way they were taught and they did not know what else to do. In a few places progressive teachers were doing better, the spirit of the times suggested improvement, and the readiness of the teachers to adopt better methods and better subject matter as soon as they had learned how was one of the hopeful signs of the times.

Whether the schools seem good or poor depends upon what features one notices. The key note of progress was found in the fact that the schools began to look more to the future and less to the past. It was no longer enough to pass on the accumulated knowledge of the past. A constructive program and creative thinking began to take the place of the recapitulation program. Likewise America was coming to be somewhat less under foreign influence. We were beginning to have educational theories of our own, and to think for ourselves. We are not in any sense turning away from Europe, or refusing to accept other good ideas which we can get across the water, but we must not only transplant and absorb, we must produce.

CHAPTER XXX

THE SCIENTIFIC STUDY OF EDUCATION

ATAVISMS of thought are very common. Educational theory is full of them, and sometimes they are able to pass as new species. New combinations, new decorations, new values, and new methods, however, give reasonable justification for calling the present movements in education new. A few years ago the main part of a teacher's job was to tell Johnny what to learn and then listen to him recite it. The superintendent's job was to hire and fire teachers, handle funds, discipline pupils, make reports, and meet parents. Sometimes he made a course of study, but he made it mainly by copying one already in use or compiling one from several in use. When it was printed it was the object of concern to teacher and superintendent. The teacher's aim was to go through the course of study. She must get from page ten to page sixty in a certain fixed time. Today there is a new job and a new program. The superintendent has become a diagnostician. He tests, measures, scores, sorts, selects, compares, rates, correlates, and compiles figures. He reckons not only with the curriculum but with mental age, chronological age, achieve-

ments, problems, projects, motives, standards, individual differences, socialization, morale, attitudes, aptitudes, vocational guidance, and a long list of other factors daily growing longer. The teacher's mind is more or less on these factors. All of these things are good when used with judgment and discretion. There is a possibility, however, that we may get such a complex conglomeration of methods, and problems that we lose sight of education. Perhaps while we are trying with rapid strides in all directions to climb the ladder of learning we are actually trotting around with a merry-go-round.

By 1890 the country had gone through economic, political, industrial, and religious struggles and was better ready for new ideas than it had been before. This does not mean that the few scholarly and brilliant men who undertook to do new things in the field of education found the general public or the mass of teachers ready with open minds to receive new suggestions or to make an unprejudiced study of school problems. Progress was slow but we began to develop American educational theories. For at least two decades G. Stanley Hall stimulated more original thinking along the lines of educational psychology than any other American. He brought some of his ideas from Germany, but he was in no sense a follower. He did his own thinking and he inspired others to think. He gathered around him at Clark University a group of men ready to carry on researches in the field of education, and not afraid to

give up long standing traditions if their findings warranted. Through numerous publications and through students new methods of studying psychology and applying it to education were disseminated throughout the country. The most distinguished psychologist the world has ever produced was William James. His books were widely read by teachers, but he did not cover so great a variety of educational subjects as did Hall.

In the broader field of education President Eliot of Harvard was the outstanding figure of a half century. A chapter covering American education from 1869 to 1920 might appropriately be entitled "Charles W. Eliot and His Times." President Roosevelt once said that President Eliot had more power than any sovereign, because he had more to do with molding the minds of men. His main activities were in the field of college education, but his influence was not confined to the college. His articles and addresses dealt with secondary and elementary school problems, and with many other phases of human welfare. Among those who had clear visions of the results of the organization of schools of education in universities none saw further nor accomplished more than Nicholas Murray Butler of Columbia University. He is a philosopher in thought, a writer and lecturer of force, and an administrator of ability. He saw the need of training men for leadership in education. Schools for the training of classroom teachers had been in operation for a long

time, but little attention had been given to the preparation of leaders. He was largely responsible for the building of Teachers' College of Columbia University. Early in life he was made President of Columbia University, but his interest in the specialized study of education continued. The direct management of Teachers' College was in the hands of Dean James E. Russell who gathered around him a large group of experts in various fields of education and built the leading institution of its kind in America. Following more or less the example of Columbia many other universities have established similar schools for the special training of educational leaders.

The work of Paul Hanus at Harvard should be mentioned because it illustrates a different type of growth not uncommon during the first two decades of this period. Harvard was slow to accept the study of public school education as a part of a university program. Members of the faculty were opposed to the new department and tried to prevent its growth. This conservative and obstructive attitude prevented Harvard from having the influence on public schools which it might have had, but even this had some advantages, and it is for that reason that mention is made here. Since every forward step could be made only with struggle nothing was done without careful consideration. Experiments were not tried and the safe and sane course was followed. In many colleges a similar situation existed. Those colleges be-

came followers instead of leaders, but to a considerable extent the majority of them have outgrown the handicap.

The list of names of those who before 1900 began the promotion of the systematic study of education is too long to give here, but it is very short compared to the list which might be given today. Soon after 1900 students of education began to be turned out on a quantity production basis. Thereafter movements and not individual men will claim our interest.

During the first decade of this century educational studies were mainly of a psychological nature. Psychological laboratories were new, and laboratory methods were just being developed. Students began to experiment with the learning processes, and they tried to find ways of measuring intelligence. The reaction times for various stimuli were measured and attempts were made to measure mental processes. The work was not wholly successful but progress was made. The chief thing that was new was the objective measurement of subjective processes. Of course the measurements had to be of physical processes, but from the physical processes mental processes were inferred. There was likewise an enthusiasm for a new terminology. This did not indicate wholly new ideas. Frequently the new terms indicated some new relationships, but often the newness was so slight that the only value in the new term was in the impression it made upon the stu-

dent. The laws of learning are expressed by the terms "readiness" and "mind-set" instead of by the older term "apperception." Very much of our educational psychology is Herbartian psychology translated into more convenient terms. This work was valuable because it made the principles more easily understood and hence more useful to the teacher. The great contribution which psychology made during this decade was the method of experimentation. Brilliant men had advanced theories which seemed to be true and workable, but they had not given much attention to testing their theories by experiment. Thus the emphasis shifted from teaching to learning. Teaching had always been nothing more than aiding pupils to learn, but teachers had not realized it. Methods of teaching must be determined by methods of learning. Teachers had overworked the concept *ought*. In psychology there is no *ought*, there is simply the law of mental activity, and learning will follow this law no matter what the teacher thinks ought to be. Just as Bacon had said that the way to control nature was to obey the laws of nature, and in order to do this it is necessary to study to find out what the laws of nature are, so the psychologist of the twentieth century says that the way to control the mind is to obey the laws of mental processes, which after all are natural laws and come under the class mentioned by Bacon.

Psychology has become specialized into several

branches, and so far this century has witnessed an enthusiasm for applied psychology. We now have child psychology, the psychology of adolescence, abnormal psychology, comparative psychology and numerous other branches in which psychology is applied to some special phase of human interest. Statistical methods are used to a far greater extent than formerly. Psychology has been found to be serviceable to business, industry, medicine, and religion, as well as to education. To education, however, it is basal. Educational methods are derived largely from psychology. It should be remembered, however, that psychology has its limitations. It can determine processes but not aims. An architect can tell us how to build a house, but he cannot tell us whether we wish a cottage or a mansion. An engineer can tell us how to build a road, but he cannot tell us whether or not we want a road, nor where we wish the road to go. A map maker cannot tell us where we need to go. He can merely show us where the roads are. So the psychologist can tell us how the mind works, but he cannot tell us whether we should teach mathematics or poetry, he cannot tell us whether it is better to train a pupil to be frankly honest, or cleverly deceitful. It is for philosophy and sociology to find the goal and for psychology to show us how to reach it.

An application of psychology which suddenly grew into popularity was mental testing. During the first decade of this century mental testing was

known only to psychologists. They were trying to find ways of measuring intelligence, but nothing very valuable was done except by the French psychologist, Binet. Proceeding on an entirely new line he developed a method which created an epoch in the field of education. A detailed account of his work and that of other psychologists who contributed to the study need not be given here. For present purposes it is sufficient to note that a system was devised to get a rating of intelligence, not of achievement. A child may have the ability to learn and yet not have much information because of lack of opportunity. A comparison of the chronological age with the intelligence shown gave a standard of measurement. By testing a large number of cases a norm was established. If a child of eight can do what the average child of ten can do he is superior. If a child of twelve can do only what the average child of ten can do he is below normal. Following this general principle a rating scale was developed. It is too much to expect the system to be absolutely reliable. The tests will not entirely fit the child whose experiences have been unusual. It is not likely that a civilized man can test an uncivilized person. Their experiences are too unlike. However, the tests have proven valuable for both normal and abnormal individuals. If they are not used for more than they are worth they are very valuable in school work. Attempts have been made to segregate pupils according to intelligence rating, but the value of this seg-

regation is at least doubtful. Many factors other than intelligence enter into success in life. The tendency to spoil those who are rated as superior and to discourage those who are rated as inferior is noticed at once. Children are very sensitive to caste distinctions and the attitudes they acquire more than offset the possible gain. Furthermore it is not at all certain that they actually learn more by being segregated. The social lessons which they get are undoubtedly bad for a democracy.

Mental testing has been a great help in discovering individual differences. Children differ in their special abilities even though the general intelligence level may be the same, and education to be most effective must be adjusted to these differences. Plato fully recognized the desirability of adapting education to the differences in native capacity but he did not know so well as is known today how to discover the differences. There is danger of applying our studies of individual differences too rigidly. If some expert had examined Demosthenes when he was a boy he would have told him that oratory was just the wrong thing for him to undertake. Even disabilities may be overcome. Aspiration, determination, perseverance, and disposition are the hardest things to measure and yet they are often the greatest factors in success. Great tact is required to advise a pupil and not discourage him. Better it is for him to strive for what he cannot attain than to give up striving, and passively and unhappily settle into in-

feriority. In dealing with human beings no rule can be applied safely without the exercise of judgment.

Along with the enthusiasm for applied psychology there developed almost a mania for statistics. Theorizing had been based largely upon individual experiences or upon guesses. Facts were needed to guide and steady the thinker, to test his theories, and to lead to new thoughts. An illustration borrowed from a source forgotten by the writer will indicate three possible methods of procedure: A spider spins out of himself, an ant collects and stores, a bee gathers materials and brings forth new products. These three methods are used in educational studies. The theorist spins out of himself and may produce something beautiful and valuable. The statistician collects, arranges and stores great quantities of facts and figures. These may or may not be useful. In either case he seems to be satisfied. The constructive thinker gathers his facts with keen discrimination, and builds them into structures having significance. The product is his own but it is based upon facts which can be examined by others.

Many books have been written upon statistical methods applied to education, and teachers have been urged to use them. They are of value since they encourage care in drawing conclusions, and tend to prevent guessing. However, they may lead to practices as undesirable as guessing. Since figures do not lie we are apt to feel certain as soon as we have figures. Ten thousand guesses summarized may

be more certain than one guess but it is still a summary of guesses and not a statement of fact. A mathematical formula looks very impressive and seems to be a guarantee of validity, but the educator's perpetual relapse is a relapse into formalism. Nearly every reform has been a protest against the formal, but the protest has been followed by a new formalism as binding as its predecessor. Just at present we are passing through a period as formal as that of scholasticism. In much of our discussion the form of expression counts for more than what is expressed. If a teacher's grades conform to a normal distribution curve that is regarded as indicative of good teaching. The ideal as determined by statistics must be the average—it may be called a mean, a median, or some other term closely akin to average. Since there are more teachers who like to play bridge than there are who like to play chess a teacher who likes chess and does not like bridge will score lower in an aptitude test than one who likes bridge. This is the only way a statistician can figure and get his kind of results. He figures in terms of quantity, and he cannot reckon with quality except as he tries to express it quantitatively. All that he can do is to count numbers of cases or measure physical things. He cannot measure how much a boy likes ice cream nor how hard it is for him to stay away from a circus. He cannot measure the influence of a poem except by counting the number of people who like it and the number who do not like

it. How much any one individual likes it he must ignore. The norm is his fetich. Ideals which point to possible improvement are taboo. This is the great weakness of statistical studies. They are as devoted to the objective as the mystic is to the subjective. What the statistician gives may be true but he does not handle the whole truth, and sometimes he may neglect important facts. Some one has given the biography of a man in the following terms: The first time he went to church they threw water on him, the next time he went they tied him to a woman, and the last time he went they threw dirt on him. The water could be measured and the woman and the dirt could be weighed, but there is still the possibility that the ceremonies of baptism, marriage, and burial may have a significance beyond the objective. Just how sacred is the rite of baptism, how much the groom loves the bride, and how much grief the widow feels cannot be expressed in quantitative terms, but they are factors in human life, and a large part of human life is made up of such factors.

The elaborate methods devised for educational measurements reminds one of the elaborate formulæ of scholastic logic. The scholastic students developed a method of measuring and testing their arguments. There was a completeness about it which causes admiration. There is a completeness about the methods of handling educational statistics which causes admiration. A bulletin published by the University of Illinois in 1928 gives a glossary of three

hundred terms used in educational measurements. To illustrate the completeness and some of the distinctions the following list of consecutive terms is given: coefficient of brightness, coefficient of correlation, coefficient of correspondence, coefficient of intelligence, coefficient of multiple correlation, coefficient of partial correlation, coefficient of regression, coefficient of reliability, coefficient of validity. The glossary is very useful because all of the terms defined are actually found in the publications now in use. How much this movement will aid the educative process, or how much it may detract from more important matters only the future can tell. The extravagances which usually accompany a bright idea have been manifest in educational measurements, but the sifting process has already begun and no doubt the useless will soon be discarded and the significant features will be preserved. The possibility of measurement is not sufficient guarantee of validity. Often we introduce into our school work factors we can measure, then we prove progress by measuring them. In this there is no real evaluation. It is not the possession of figures but the intelligent use of them which aids education.

The movement which gives promise of bringing greater changes in education than any other is the scientific study of curriculum construction. In the past curricula were the result of slow growth by addition. Very little had ever been subtracted except religion. In the interests of religious liberty it had

been almost entirely taken from the public schools. If a subject had been put into the curriculum because of a definite need during a particular period it was hard to get it out because teachers became interested in it and wanted to teach it to their pupils. When some thinker tried to improve the curriculum by constructive suggestions he was likely to base his program upon his own ideals of education without an objective study of needs. Spencer was one of the few notable exceptions. He made an examination of human needs and found there was need for very much more science than had been taught previously, but he did not go far in determining which sciences and what topics within each science should receive most attention. The curriculum represented an accumulation of our educational heirlooms. One of the tasks of the present century was to examine these heirlooms and try by as scientific procedure as it was possible to use to determine their values. Another closely related task was to examine human life and construct a curriculum which would meet the needs, and waste as little time as possible. Curriculum construction thus became one of the largest problems, and one which has commanded the attention of our best educational thinkers. Making a curriculum is a great undertaking, but an even greater one is to get the classroom teachers from primary grade to the university to appreciate the problem and to try to adopt the best suggestions they can get. The knowledge which we happen to possess is

a large factor in the selection of subjects and of topics within the subjects. Even the scientific curriculum builder must be influenced by the knowledge he has. If he had received a different stock of knowledge from his teachers he would no doubt decide somewhat differently the questions which confront him. However he tries to be impersonal and objective in his studies. That is the main feature which distinguishes his work from that of earlier writers.

Tradition, fashion, and superficial study of needs has been sufficient reasons for the great majority of teachers and administrators. Now new objectives have been discovered and new methods of evaluating subjects. Neither fashion nor tradition can be entirely thrown away. But they should be properly evaluated. Social needs call for some bits of knowledge merely because they are fashionable. The latest popular novel may have no value except for purposes of conversation. Many of the facts of history are used only for this purpose. Common traditions even though they may not be true exert a powerful influence in binding people together politically, socially, economically and morally. Hence these are to be considered, but they should be continued only after evaluation, and not retained blindly. The disciplinary value of subjects had been regarded highly and is still held by a large number of teachers even though it has been proven many times that mental discipline is not the factor it has

been supposed to be. Vocational preparation has always been one of the objectives of the curriculum maker but not until recently did vocational requirements receive systematic study. The preparatory value of studies especially with regard to college entrance and prevocational work have received much attention in the past. However, college entrance requirements have been, and to some extent still are, very arbitrary. Present studies attempt to discover what subjects are valuable in college. Prevocational work was formerly accepted on tradition without much thought, but today that is being carefully studied. For example, just what mathematics does a merchant, or carpenter or housekeeper need?

The four most important fields of study at present are: (1) child interests; (2) job analysis; (3) activity analysis; (4) social needs. These are not entirely new fields. Previous chapters have indicated some consideration of them, but never before have they received such rigid and systematic study as during the past two decades. The newer studies of child interests have been based upon the newer psychology. The importance of recognizing these interests and adapting the work to them was emphatically stated by Rousseau, Pestalozzi, Froebel and others. Job analyses had been made by the Greeks and by a great many others, but the tendency of teachers was to take the analysis made by some early, perhaps even ancient, writer, and assume first that the jobs of today are the same as they were then, and sec-

only, that the earlier writer had made a correct analysis of the job. Today very little is accepted on faith. Everything must be subjected to careful scrutiny. Similar statements might be made concerning activity analysis. The term activity lists would be more accurate. A list of activities includes those activities belonging to the job, but it includes much more. It includes everything we do. When it has been determined what people do then it is assumed that children should be trained for such activities.

These efforts have helped greatly to rationalize the curriculum, and they have helped to eliminate some of the useless matter that has found its way into the curriculum. It cannot be said, however, that all curriculum problems can be solved by analyses, however detailed and complete. The chief difficulty is that all of these studies attempt to discover what now is and ignore what might be. There is no provision for progress. Perhaps there are better ways of performing the jobs than those in use. A wiser selection of values might call forth other activities. Judgment as well as facts will be needed.

These movements are indicative of rapid progress, but they cannot be evaluated correctly until the future has shown the results. No doubt some features will be eliminated, while others will grow in importance. The determination to make unbiased studies, and the courage to put convictions into practice give sufficient guarantee of ultimate improvement.

CHAPTER XXXI

VOCATIONAL EDUCATION

EDUCATION has always been in part vocational, but during the present century the term has received a new meaning, partly on account of the great increase in the number of vocations, and partly on account of the increase in the complexity of the vocations followed. Training for any kind of a job by which a person can earn a living is vocational education. It is common to distinguish between professional and industrial courses, but both are vocational. Professional courses require more training and the work is more complicated but the objective is specific training for the job. Just what constitutes a vocation is not easy to say. Whether we say there are two thousand vocations or twenty thousand depends entirely on our conception of a vocation. If giving two turns to the third bolt on the left side of an automobile that is being built is a vocation then there are many thousands. To say that a man learned a trade usually means that he has learned all of the phases of a particular line of work, such as painting, carpentry, plumbing, or anything which constitutes a separate business. While an accurate definition is not possible

there need be no confusion about the use of the term. A general education may mean that which will fit in many vocations, or it may mean that which has no reference to any vocation. It is not so much the nature of the education but the objective which makes it vocational. Music and art are vocational for those who expect to make their living by them. Vocational education is not primarily for dreamers but it should give the doer a vision of his opportunities, of his relationships in the world of people and of things, and of the results of his labor. Without vision labor is drudgery. The understanding of a calling means more than the mastery of its technique.

Trades and professions have been learned by apprenticeship. Not many years ago the prospective doctor learned nearly all of his medicine in a doctor's office. The prospective lawyer learned law in a lawyer's office. In all of the industries it was necessary to learn by doing the work. But this method is no longer adequate. The mechanical pursuits of a century ago were much less complicated. A wagon maker could make all of the parts of a wagon and put them together and then paint it. Now hundreds of men work in factories to produce a wagon. Apprenticeship does not fit this age of complicated machinery. Even the making of a barrel head involves several vocations. While one man was making a wagon he could have a boy help him and he could show him how to do all that was to be done. In a

factory where each man must do his work in a particular way and at a given speed it is not easy to have a helper. Men do learn some things in that way, but shop foremen are very apt to be poor teachers. Economic, social, and industrial conditions require the great majority of people to have some special training to prepare them for productive activity.

Often a distinction is made between vocational and liberal education, but the distinction is not very useful. There does not exist a program of studies which is entirely vocational nor one which is entirely liberal in the common meaning of that term. No one knows just what is meant by a liberal education unless it means an agreeable field of study for young men who expect their fathers or their fathers-in-law to be liberal in providing for them, or for young women who do not expect ever to earn money, or to take seriously the task of managing a home and rearing a family. That sort of education is not in harmony with the spirit of American democracy. It might fit in a country which maintains an hereditary and non-productive aristocracy, but America expects every person to render reasonable service and to produce according to his capacity. The first duty of the school then is to provide for every child sufficient training to enable him to support himself and to be a useful member of the community. In addition to that he should have something to enrich his life and to make him more interesting to his asso-

ciates. Culture and refinement and polish he should have in generous quantity along with his vocational training, but when these accomplishments are made the center of the curriculum, and the training for the job is made a side line the school is not in accord with our type of civilization. Culture is dependent upon production. In order to be able to enjoy the culture offered by modern civilization the individual must be able to produce something to exchange for the luxuries he desires. The best of culture, however, is not found outside of the job but in it. Knowledge and skill should make work more attractive. Seeing the joys of labor is an important phase of culture. It is hating the job and finding nothing of interest in it that makes work drudgery. One's philosophy of life should be integrated with his conception of his job. The noblest features of civilization are dependent upon the commonplace activities of men. The only way to dignify labor is to make clear its significance. The mere technique of the task is but a part of vocational education. When treated in the broader way it is one of the most effective means of character building. It is in the vocation that precept and practice are united. If character is manifested in business there will be little trouble about securing the desired character in other phases of life. The personal qualities which are common to all vocations are just those which make for the best character. When presented in connection with the vocation they make far more impression

than when presented in abstract precepts. If it is possible to secure the right attitude toward labor crime will be greatly decreased. Education for leisure is so completely individualistic that it has little to do with character building. Developing a body of knowledge without reference to its application gives no guarantee of value. It is the use to which things are put that determines the value.

The United States has been somewhat behind the more progressive nations of Europe in the introduction of the industrial lines of vocational education. Professional education in the higher institutions is centuries old. Technical courses are comparatively new. Several higher institutions giving technical training were established during the nineteenth century, but the rapid growth of such schools must be credited to the beginning of the twentieth century. The credit for working out the system must be given to such schools as the Drexel Institute of Philadelphia, the Armour Institute of Chicago, Pratt Institute of Brooklyn, and numerous others which might be mentioned. The success of these institutions encouraged universities throughout the country to establish technical schools.

The need and the value of such training very soon led to the establishment of trade schools of secondary grade, and also schools of agriculture and commerce. These schools reached only a small percentage of those who needed the training, and public high schools entered the field. Within a few years

such work was recognized as belonging to the curriculum of every high school large enough to maintain several departments. The federal government has appropriated money for the support of courses in agriculture, home economics, and the manual arts. The government helps to support these subjects because they are regarded as most fundamental to the welfare of the people. Such work has been extended also down to the elementary schools. Home economics and manual training are now common in elementary schools. Elementary agriculture is taught in many rural and village schools.

The welfare of a nation depends largely upon the production and conservation of wealth. The standard of living in the United States is higher than in any other country and therefore wages must be higher. The only way to have more money to spend is to increase production. In order to compete with other nations it is necessary to maintain a high degree of efficiency in production. Large industrial corporations have provided some special education for their employees, and they have co-operated with public schools in their industrial work. Increased skill increases production for them, and hence for the nation. This is a part of the general program of developing national resources. One form of coöperation which has proven effective is the part time school. In this type of school the pupils work in a manufacturing plant for part of the time and go to school the other part. One method is

for the pupils to go to school a half day and work in the factory the other half. Thus two sets of pupils can use the same school equipment and they can keep their share of the factory going. Another method is for the pupils to attend school the full day for a certain length of time and then go into the factory and work full time for an equal period. Thus two sets of pupils can alternate work and study. The former method is more economical so far as school work is concerned because a pupil can work a half day and during the remainder of the day and the evening do more than half of the usual amount of school work. It does not take two years to do a year's school work. In the case of agriculture it is much easier to secure an opportunity for the application of the lessons learned. In any rural or small town school the pupils can have room to produce something either at home or near the school grounds. Vocational education is a social matter while cultural education is almost entirely an individual matter.

Broadening the vocational field for women has made greater changes in the social and economic life in America than any other one factor. The great increase in the number of non-domestic callings for women has been the natural result of industrial development. The improvements in machinery have made industry no longer a matter of physical strength, and it has made possible shorter days. It has also provided conveniences of living which make

it possible for women to be out of the home more hours per day than formerly. The demand for more things has stimulated women to work in order to have the extra things they wish to possess. The number of women wage earners has become so great that the prejudice against them as workers is rapidly disappearing. That they are efficient in a great many lines of work is now well established. There remains, however, a very puzzling social problem of deep significance. Will the widespread entrance of women into wage earning fields destroy the home life and result in the neglect of the early training of children and lead to a weakened morale in the nation? Men could support their families in a modest way, but the modern desire for more luxuries and comforts, and for a hitherto unknown high standard of living for the masses creates demands which require more money than the man can earn. Hence the wife also works as a wage earner. No doubt this increases production, but the effect upon the coming generations cannot yet be told. One thing is certain. It places upon the school a responsibility far greater than it has even had before. The school is rapidly adapting itself to the condition of the times. It is no longer merely a place where lessons are recited, it is an institution devoted to the child's physical, mental and moral development. The United States Children's Bureau maintains child guidance clinics in more than three hundred cities. School doctors, school nurses, advisers, supervisors, psychologists,

and experts in various fields look after the welfare of the nation's future citizens. Perhaps these many helpers with their special training and scientific methods may be able to do more for the children than their more or less ignorant parents have done in the past. We are living in a new era, and the destiny of the race is in the hands of the school. Will the school be equal to the task? One form of assistance the school must have, and it will take time to get it. In Sparta every adult was an educator, and was concerned about the developing character of the youth. In America every individual should have the same concern. The school is the center of the educational system, but it is the whole life of the community which builds character. Every store, every shop, every organization, and every activity is an educational force. The difficult problem for the school is not devising methods of conducting classes and handling children, it is getting these forces organized to promote the welfare of youth. If community leaders can be made to realize the need soon enough the work can be done, if they cannot we may pass through a period of decline before another upward movement takes place.

A young man who had spent his whole life on a farm, had finished high school, and was ready to plan a career for himself asked the writer for some advice. Upon being asked what he liked, he said, "I do not know what there is to like except farming." Thousands of boys are in the same situation. They

do not know what there is in the world to do, and they cannot choose. The need of vocational guidance has been impressed upon educators. Information about vocations is more useful than information about Cæsar's campaigns in Gaul. This information is partly to aid in the selection of courses and partly to secure a better adjustment of the individual to his environment. Every one should know about other vocations than his own. He should know what other people do and what their contribution means to society. That is a part of his social and economic training. It might be called general vocational training.

The more specific task of vocational guidance consists of two phases: (1) the fitness of the individual for a given occupation, (2) the opportunities for individuals to follow particular callings. The fitness of the individual is determined by tests of his capacities, by a study of his record in school and out, and by consulting his interests, ambitions, and hopes. In addition it is necessary to study the requirements of the job. What capacities are necessary for success in each kind of occupation? Are the qualities which will make a boy a good preacher different from those which will make him a good merchant or engineer? Before he can be advised it will be necessary to know what qualities are required as well as what qualities he possesses. Vocational opportunities can be studied either locally or in a wider field. If the country needs many electricians and but few

lawyers it would be unwise to advise many boys to study law even though they showed the qualities required for success in law. In the past there has been too large a proportion of students directed toward the professions. Some consideration should be given also to prospective changes in social needs. Perhaps society would be better off if there were fewer persons engaged in certain occupations. If so the guidance expert may coöperate with the sociologist and help to promote better conditions than those we now have. Guidance is a new field of study and educators have not yet learned the things they will need to know in order to be successful in it, but the attention given to it promises progress in the near future.

With reference to specific vocational training there is great difference of opinion about the time it should begin. It is held by some that it should be postponed until after a thorough general education has been secured. Others hold that it should begin early because many pupils drop out of school while young and if they have no special training they may find it hard to earn a living for themselves. It is also claimed that what is learned as a part of a pupil's own expected activities will be better learned, and the motive of future use is the most effective. What the practice of the future will be it is impossible to say. In recent years the tendency has been to move vocational education downward.

Another question not easy to settle is how many vocations deserve special programs in the public

schools. In the first place the requirements of a vocation should be great enough to justify a course. It is obvious that a four-year course for street sweepers would be unnecessary. In the second place there should be enough pupils to justify the expense. A small high school with only one pupil who wished to be a machinist could not afford to offer a course for him. The demand in one community may be very different from the demand in another. Expediency rather than educational theory must be the deciding factor.

The appeal of the job has been a large factor in increasing the attendance in high schools. Pupils can learn more things than were offered in former years and hence they go to school. During the past thirty years the number of pupils in the high schools has increased more than six times as fast as has the population of the country. This has added somewhat to the cost of education but it has added very much more to the productivity of the nation.

CHAPTER XXXII

SCHOOL ORGANIZATION

CHANGES in school organization have been mentioned frequently in previous chapters, but it will be worth while to summarize briefly the important changes. A general expansion has taken place in all schools. The changes have been partly due to conveniences of administration and partly to changing social and industrial needs. The kindergarten has been accepted as a part of the public school system, and is no longer regarded as an experiment. The changes in methods need not be discussed here. The only administrative change is in the direction of fitting kindergarten to the primary grade. The methods used in the kindergarten have been sufficiently different from those most favored in the primary grade that kindergarten pupils have found difficulty in adjusting themselves to the primary grade. It is possible to combine somewhat the type of work of the two schools and thus make the transition easier. This change promises good results.

A far more radical change has been made in the elementary school. The eight-year elementary school had not been the result of a carefully thought out

plan. There was no very good reason for making the elementary course eight years in length, but it seemed to grow that way. Seven years seemed a little short and nine years seemed a little long. In the seventeenth century Comenius had suggested that the educational time should be divided into periods of six years each—six years at the mother's knee, six years in the elementary school, six years in the secondary school, and six years in the university. The basis of this classification was the psychology of the growing pupil. At about six years of age he grows out of babyhood and is ready for school. By the age of twelve—just as he is about to go into his 'teens—he passes a transition stage and becomes a big boy. He does not like to associate with little boys and he needs different treatment. By the age of eighteen he is beginning to become a young man and he should be treated like a young man and have a man's problems to deal with. The twenty-four years included in this program would take him through what we now call the graduate schools of our universities. This is almost the program that is now being worked out. This century has seen the six-year elementary school meet with general favor. The six-year high school has been divided into two periods of three years. The former is called the junior high school, and that is the great contribution of this period to public school organization. The most approved junior high school consists of the seventh, eighth and ninth grades, but some cities

have organized the seventh and eighth grades into a special school and called it a junior high school. The most noticeable difference in the school work is that the junior high school teachers are departmental teachers and not grade teachers. Likewise the pupils pass by subjects and not by grades. This makes it possible to have teachers with special training in subject matter and it gives the pupil the advantages of study which are offered in the senior high schools. The transition is thus easier. The elementary school is concerned largely with the tools of learning, the junior high school is concerned primarily with subjects. It is believed that under this system fewer pupils drop out before finishing high school. Certain it is that high school attendance has increased, and the number of high school graduates has greatly increased. With the departmental organization it has been possible to introduce more vocational work than had been possible in the older form of grading. Pupils will work better when they have a definite objective. The junior high school has a more natural social organization than has existed in the grades and this is held to be a good training for participation in a democracy. Differences in capacities and needs of children have been recognized and the variety of courses offered makes for improvement in the adaptation of the work. The junior high school has had very few unfavorable criticisms considering the newness of it, and it is safe to say that it is now firmly established in our school system.

The four-year high schools and the three-year senior high schools have not undergone very marked changes in organization. They have ceased to be guided so completely by college entrance requirements, though a far larger percentage of their graduates now go to college. They are guided somewhat more by educational needs, and the colleges are adjusting their requirements to the changes in the high school courses of study. A committee of the National Education Association formulated the objectives of secondary education as follows: (1) health, (2) command of fundamental processes, (3) worthy home membership, (4) vocation, (5) citizenship, (6) worthy use of leisure, (7) ethical character. These objectives have been generally accepted but not generally adopted. It is hard to change customs and the old order of work continues because teachers find it difficult to get out of the rut. However, the tendency is in the direction of the objectives mentioned. Meeting life's needs receives more attention than ever before.

The equipment of high schools has made great advance. The laboratories and libraries compare favorably with those found in many colleges of the nineteenth century. The sciences have their separate laboratories and the home economics, manual training, and agriculture departments usually possess equipment of considerable value. The expense of maintaining high schools has materially increased. Athletics, music, dramatics, school papers, and pu-

pil organizations of various kinds have been introduced, and the entire life of the school has taken on a character more like the life of adult persons outside of school. For a time the high school was recognized as "the peoples' college," since it was as near to college as the majority of people could afford to go.

A very recent innovation which offers something of higher education to far greater numbers is the junior college. This seems destined to take a place in the minds of people somewhat like that held by the high school for the past half century. Many high schools have added two years to the secondary course and thus have offered two years of college work, intended for local students who cannot well afford to go to some four-year college, or who prefer to attend school near home. Only cities of considerable size can afford to maintain junior colleges unless state support is given. The methods and management of these junior colleges have been similar to those found in the high schools. In general a higher standard of professional training has been required of high school teachers than has been required of college teachers, and furthermore the superior high school teachers have been advanced to the junior colleges, and thus very encouraging educational results have been secured.

The reason for establishing a junior college as an upward extension of the high school—that is, that more students may be able to receive a college edu-

cation—does not hold for making a junior college out of the first two years of a four-year college. Such organizations have been created, but there is not sufficient data at hand to justify an opinion about their value or their permanence.

One of the striking developments of the past quarter of a century has been the creation and growth of the four-year teachers' colleges. Previously nearly all normal schools had offered two years beyond the high school. Many of them had maintained a preparatory department covering three or four years. With the growth of high schools these preparatory schools were less needed. The demand for higher training for teachers led to the upward extension of the schools. The universities were slow to build up their schools of education, and the demand for college graduates with professional training was met by the teachers' colleges. There is now beginning a movement to require the master's degree or its equivalent for a high school certificate. The signs of the times indicate that graduates of teachers' colleges will teach in the elementary schools, or devote a year to graduate study in a university school of education and thus prepare for high school teaching or for supervision.

As the "little red school house," rarely painted red, typified American education during the nineteenth century, so the consolidated school typifies education of the twentieth century. With the improvement of roads and of means of transportation

it has been possible to build school buildings which can provide for several grades, and for pupils living in a comparatively large territory. The consolidated elementary school provides better equipment, better paid teachers, far better and more sanitary housing conditions, and probably better social training. The consolidated high school has brought within the reach of rural and village pupils secondary education with advanced standards.

The establishment of special schools for atypical children is a recent achievement. We have not only schools for the deaf and blind, but schools for backward children, for the physically weak, for delinquents, and for other types of children needing special care and expert attention. To save every one who can be saved is the goal. Open air schools have been conducted in some cities with success. Separating pupils into classes according to their differing capacities is growing in favor, but not without some opposition. Some educators are strongly in favor of it and some believe it very unwise. The plan is still an experiment. A group of pupils all of superior intelligence should be able to cover more ground in a course than a group with inferior pupils mixed with the superior ones, but covering ground in a subject may not provide the highest type of education. It may not prepare the pupil for the life he will lead outside of school. Society outside of school is not organized that way, and each pupil in a public school should learn to get along in a democratic world.

Much of the educative process is due to associations. A brilliant aristocrat ill adjusted with his fellows may be less successful in the world than a less brilliant but well adjusted person.

The American public school system has been organized in a very extensive and very complicated way to provide the best possible opportunities for growth in efficiency for all classes of people. The plan is to have a type of school to fit each class. To raise a large body of people a short distance is as great an achievement as raising a small body a long distance. The nations which have in the past come into prominence and then faded away have each produced a few brilliant men but they have failed to see the necessity of raising the level of the masses. It is the task of American democracy to organize its educational forces in such a way that they can carry out this huge undertaking.

CHAPTER XXXIII

THE PROFESSION OF TEACHING

PROFESSION implies a higher degree of specialized knowledge than is required in non-professional work, but it implies very much more than that when used in its highest sense. We sometimes use professional in contrast with amateur to indicate that one earns his living by the activity—as a professional baseball player. In this sense the word has a very limited meaning and has little of the significance belonging to the term when used in its higher sense.

Profession in the higher sense implies superior knowledge of a given field gained through prolonged systematic study. This includes a deeper understanding of the field in relation to other fields of study and to human life. Without this perspective one may be skillful in technique but hardly professional. Profession also implies the recognition of ethical relations within the group and beyond it. Unfortunately the lack of this quality is sometimes noticeable, but nevertheless it is an important part of the professional attitude. It follows from this that if specialization is applied to the subject only we have merely masters of subjects with only a small part of professional training. Teaching deals

with the entire range of human interests, activities, and characteristics, and therefore has the widest professional requirements.

The teacher's professional preparation consists of the study of (1) the nature of the pupils to be educated; (2) the making of curricula; (3) systematic methods of choosing and presenting materials so that the pupil may be formed as well as filled; (4) the meaning of education and its place in the civilization which we enjoy and help to make; and (5) a teacher should have a philosophy of life, which has more to do with molding the lives of pupils than has the presentation of precepts; and finally, (6) a teacher should have a vision which enables him to look beyond the tools and mechanics of instruction to a larger, nobler, and more efficient life for the individual and to an expanding and enduring industrial, economic, and social life as the nation's destiny. "Where there is no vision the people perish." The teacher must absorb contemporary civilization, share it with his pupils, and altogether grow into ever larger, more varied, and more wholesome experiences. Methods and processes are determined by aims, and in the determination of objectives the teacher uses the natural sciences, sociology, philosophy, and practical experience. The spirit of service is fundamental, but professional service is guided by intelligence and understanding. Hence the need for thorough and elaborate preparation.

During the past two decades means of professional advancement have been increasing too fast for teachers to keep up. There is too much to learn and it is impossible to form habits of thinking fast enough to keep abreast of the changes. At Columbia University more than two hundred courses in education are offered to students. The quantity of literature published for teachers is almost beyond estimate. Within two years over three thousand master's and doctor's theses were written by graduate students in American universities. Only a small part of these were printed, but the number is some indication of the amount of research that is being carried on in the field of education. In many cases no doubt the overspecialization has led to narrow views just when broad views are most needed, but the advantages far outweigh the disadvantages. Teachers have been jolted out of their complacency and dogmatism, custom and tradition have given place to investigation, openmindedness has become more praiseworthy than settled conviction, blind procedure has given place to understanding, and the determination of values rests more upon evidence than upon personal taste.

The American ideal is democracy, and the major concern of democracy is education. President Herbert Hoover has said:

This country gave me, as it gives every boy and girl, a chance. It gave me schooling, independence of action, opportunity for service and honor. In no other land could a boy

from a country village, without inheritance or influential friends, look forward with unbounded hope. My whole life has taught me what America means. I am indebted to my country beyond any human power to repay.

In this country the state furnishes education for all, and even requires parents to send their children to school. There is a steadily growing need for more education, for more kinds of education, and for education for more people. Ignorance is non-productive and inefficient and therefore uneconomic and unsocial. Education is becoming more thoroughly American, and relatively less under European influence. This gives us as a goal equal opportunity, and in the field of administration much has been done to equalize educational opportunities. Special efforts in this line are necessary because the industrial conditions tend toward unequal distribution of wealth and population.

American democracy through its school system has assumed a prodigious undertaking—that is, the assimilation of an enormous foreign population without the loss of Americanism. Can we Americanize foreigners instead of foreignizing America? Only by means of public schools. While in a few places the process has not gone on as rapidly as we should wish, on the whole America has been successful in this beyond the comprehension of European people. As we think over the history of nations the results in America are astonishing.

Democracy means more than equality at the polls.

In a pure democracy men are free from intellectual slavery. American democracy through its universal education is making itself into a widespread aristocracy. This does not mean an oligarchy. Quite the opposite. A universal aristocracy would be a nation in which each one had made the most that was possible of himself. This is the goal of democratic education. Education is becoming very much more integrated with actual life. This is shown in the curriculum, in the aims, and in the general spirit and activities of the school. There is a continual process of self acceleration. Education makes more life, and life continually demands more education. Thus the democratic level is being raised to the aristocratic level, without the loss of the ideals and values of democracy.

President Glenn Frank of the University of Wisconsin has written a prayer for teachers which expresses in an impressive manner the professional attitude of today. The following is a part of that prayer:

O Lord of learning and of learners, we are at best but blunderers in this God-like business of teaching. We have been content to be merchants of dead yesterdays, when we should have been guides into unborn tomorrows. We have put conformity to old customs above curiosity about new ideas. We have thought more about our subject than about our object. We have been peddlers of petty accuracies, when we should have been priests and prophets of abundant living. We have schooled our students to be clever competitors in the world

as it is, when we should have been helping them to become creative coöperators in the making of the world as it is to be. We have counted knowledge more precious than wisdom. May we realize that it is important to know the past only that we may live wisely in the present. Help us to be more interested in stimulating the builders of modern cathedrals than in retailing to students the glories of ancient temples. May we be shepherds of the spirit as well as masters of the mind. Give us O Lord of learners, a sense of the divinity of our undertaking.

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